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Care and Education of Crippled Children

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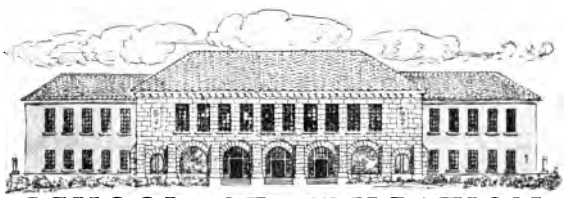

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UNITED WE STAND. (See page 168)

RUSSELL SAGE
FOUNDATION

CARE AND EDUCATION OF CRIPPLED CHILDREN IN THE UNITED STATES

By
EDITH REEVES
SPECIAL AGENT DEPARTMENT OF CHILD-HELPING
RUSSELL SAGE FOUNDATION

INTRODUCTION
By HASTINGS H. HART, LL.D.
DIRECTOR DEPARTMENT OF CHILD-HELPING

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TO THE BRAVE LITTLE PEOPLE

Photo by Jessie Tarbox Beals

FOOT RACE—THE START

CANCELLED

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CARE AND EDUCATION OF CRIPPLED CHILDREN IN THE UNITED STATES

INTRODUCTION

By Hastings H. Hart, LL.D.

Director of the Department of Child-Helping of the Russell Sage Foundation

THE study of the work for crippled children in the United States which is here reported has extended over a period of more than two years. It was conducted by Miss Edith Reeves, a graduate of the University of South Dakota and Radcliffe College, who had two years' previous experience, under the Women's Educational and Industrial Union of Boston, in research work on labor laws affecting women and children in Massachusetts. It was at first proposed to study primarily the matter of vocational training of crippled children, but it soon appeared that in order to consider the vocational work intelligently, it would be necessary to understand fully the institutional work.

New institutions for crippled children are being created every year, but heretofore the founders of such institutions have had no comprehensive source of information with regard to their construction and management. It is hoped that this report, with its illustrations, plans of buildings, and statistical tables, will afford valuable assistance in such undertakings. No comprehensive study of American institutions for crippled children has heretofore been made.*

Efforts in behalf of crippled children include surgical work in hospitals and dispensaries, care during convalescence in institutions,† asylum care for incurable and protracted cases, instruction in institutional schools and day schools; also industrial and

* In a recent pamphlet Douglas C. McMurtrie has treated the subject intelligently, but briefly. See McMurtrie, Douglas C.: The Care of Crippled Children in the United States. New York, 1912. Published by the author.

† A small amount of visiting nursing service for cripples is carried on in connection with certain dispensaries.

vocational training in institutions and special schools. The present study covers all of these lines of work except where carried on in orthopedic wards in general hospitals or in homes for incurable adults which contain some crippled children. Most hospitals do more or less orthopedic work; some of the larger ones have special orthopedic wards; but hospitals as a rule deal with comparatively few orthopedic cases and treat them in the regular surgical wards.

In making this study Miss Reeves has visited nearly all of the institutions described.*

The statistics cover 37 institutions—10 orthopedic hospitals, 14 convalescent hospitals or homes, and 13 asylum homes. The united capacity of the 37 institutions is about 2,500 children.† Some of these institutions maintain summer homes whose work and expenses are included with those of the main institution.

For convenience of study Miss Reeves has divided the institutions for crippled children into hospitals, convalescent hospitals or homes, and asylum homes. It is impossible, however, to make a definite line of division. Some of the hospitals and all of the asylum homes provide a certain amount of convalescent care; some of the convalescent hospitals or homes do operative surgery. The endeavor has been to classify the institutions according to that feature of the work which seemed to be most prominent. There are several organizations doing work for cripples living in their own homes, of which the Association for the Aid of Crippled Children and the Crippled Children's Driving Fund of New York, reach by far the greatest number of children.

The foregoing include all of the institutions in the United

* The one at Seattle was visited by a special agent.

† Miss Reeves studied 27 additional institutions which are not included in the statistical report. These 27 institutions include the following:

Institutions which preferred not to furnish statistical information	2
Hospitals for children in which orthopedic work constituted a minor feature	5
Convalescent hospitals or homes in which the work for crippled children constituted a minor feature	4
Asylum homes in which the work for crippled children constituted a minor feature	2
Summer homes not connected with the above 37 institutions	8
Private schools for crippled children (including one for adults)	6

An account of the 27 additional institutions will be found in the Appendix.

COUNTRY BRANCH NEW YORK ORTHOPÆDIC HOSPITAL, White Plains. (See page 172)

Graduates' Reunion

Class Room

Ready for Surgeon's Weekly Inspection. (See page 172)
COUNTRY BRANCH NEW YORK ORTHOPÆDIC HOSPITAL, White Plains

States, as far as we are informed, which are devoted to the care of crippled children. The statistical report does not include classes in public schools for crippled children. Such classes we find as follows: In New York City, 39; Chicago, 7; Cleveland, 4; and Detroit, 1; total, 51 classes.

A UNIQUE SPIRIT

The most impressive result of this study has been the revelation of the extraordinary spirit which animates the inmates, the caretakers, the nurses, the teachers, the superintendents, the surgeons, and the donors of institutions for crippled children. This unique and potent spirit characterizes nearly all of these institutions; orthopedic hospitals, convalescent hospitals, and asylum homes alike. It is the same spirit which pervades many institutions for the deaf and blind.

The children manifest a cheerfulness, courage, and enthusiasm which are a standing rebuke to pessimism. The New York Association for Improving the Condition of the Poor has circulated tens of thousands of pictures of "Smiling Joe," strapped day and night to a board, in the most constrained position, yet exuberant with life, spirit, and jollity. Smiling Joe is a fair exemplar of hundreds of crippled children. To witness a game of baseball in which every player wears a brace or carries a crutch, and to see the life and enthusiasm which animate the game, is a revelation.

Little children, pale, worn, and thin, and handicapped by disease or deformity, are found in school, proud of their ability to keep fully abreast of children in the public schools. The windows of their school rooms are wide open, or they may be found in blanket suits studying on outside porches in midwinter, earnest, happy, and progressive. Many of these children are eager to measure up to the accomplishments of normal children and become self-supporting, independent citizens. The nurses, teachers, and caretakers generally foster and encourage the brave spirit of their little wards. They constantly encourage a spirit of self-help, striving to develop initiative and independence among the children.

In many of these institutions, cripples, young or old, carry on the work of the house and sometimes assume large responsi-

bilities. One of the most active and efficient nurses in the New York Hospital for the Ruptured and Crippled has never walked a step but goes about in a wheel chair, and many of the employes are cripples. In the Country Branch of the New York Orthopædic Hospital the house physician, a surgeon of unusual skill, is crippled. In the Home for Disabled Children at Maywood, Illinois, the teacher, who was the founder of the institution, is an armless girl who can do with her feet most ~~of the things~~ which ordinary people do with their hands, including the use of a telephone and of carpenter's tools, and can even comb her own hair.

The superintendents of the institutions are, almost without exception, men and women of large vision and inspiring purpose. The fine spirit which has been noted among the subordinate employes is due partly to the skill of the superintendents in selecting them and partly to the inspiration which has been caught by the subordinates from their chiefs.

The surgical directors of these institutions include the leading orthopedic surgeons of the United States, who command high fees; but they give their time and skill to the children of the poor without pecuniary reward and with the same cheerfulness and fidelity as to the children of the rich. They have not been content with the exercise of their skill in the operating room but, almost to a man, they are addressing themselves to the problems of convalescent care, restoration to health, and the vocational need.

The donors have caught the spirit of the movement and have not only poured out their wealth with a free hand, but have given their personal interest to the work. The late George D. Widener was practically superintendent of the splendid Widener Memorial School at Philadelphia. He directed its operations personally and paid the bills month by month. Miss Emily A. Watson has not only built the beautiful country home of the New York Orthopædic Hospital at White Plains, supporting it entirely from her own resources, but she frequently visits it and keeps in personal touch with the children. The Chicago Home for Destitute Crippled Children is a hospital carried on by a group of wellknown Chicago women, who have not only performed the duties of trustees, but have personally solicited the funds for the building and maintenance of the hospital. They have even kept the accounts and paid

the bills and have now built a beautiful and well equipped country home.

Even in the state institutions for crippled children there has been an absence of the partisan political control which has blighted so many state institutions, and the same spirit of altruism has almost invariably prevailed. For example, the Minnesota State Hospital had its origin in the sympathetic heart of a crippled girl, who, almost alone, secured the initial legislation. The surgical director has given his services for sixteen years without remuneration. The authorities of the St. Paul City and County Hospital have lent the facilities of that institution to the state at a merely nominal compensation. In Massachusetts a bill was introduced in both houses of the legislature for the establishment of a state institution for crippled children. The bill was reported back unfavorably by the committees of both the House and the Senate; nevertheless, the bill passed both houses and was signed by the governor. The governor appointed a commission which studied the care of crippled children at home and abroad, abandoned the traditions of both hospitals and asylums, and built an admirable state hospital school.

It is fair to say that the credit for this unique spirit in institutions for crippled children is due chiefly to the unselfish devotion of the orthopedic surgeons who lead the movement. Their spirit does not differ in kind from that of their brethren in other hospitals and other lines of medico-philanthropic work. But this particular field offers a peculiar opportunity for the development and manifestation of altruism in its highest perfection. The patients are under care for a longer period than those in other hospitals and the results are notable because of the special handicap.

DEVELOPMENT OF INSTITUTIONS

The development of institutions for crippled children has been very gradual. In this report we have listed 37 institutions, in 13 states, as follows: Maine, 1; Massachusetts, 2; Connecticut, 1; New York, 12; New Jersey, 3; Pennsylvania, 6; Maryland, 2; Ohio, 1; Illinois, 4; Michigan, 1; Minnesota, 2; Nebraska, 1; Washington, 1. Of the 37 institutions, 10 are found in the two cities of New York and Philadelphia.

The year of opening the first institution for crippled children in each of the 13 states was as follows: (1) New York, 1863; (2) Pennsylvania, 1877; (3) New Jersey, 1891; (4) Illinois, 1892; (5) Massachusetts, 1894; (6) Maryland, 1895; (7) Connecticut, 1896; (8) Minnesota, 1897; (9) Ohio, 1903; (10) Nebraska, 1905; (11) Washington, 1907; (12) Michigan, 1907; (13) Maine, 1908.

In the twenty-eight years from 1863 to 1890, only five institutions were established, all in two cities: two in New York City and three in Philadelphia. In the ten years from 1891 to 1900, 12 institutions were established. In the eleven years from 1902 to 1912, 20 institutions were established.

ARCHITECTURE AND COST OF LEADING INSTITUTIONS

The most complete and perfect orthopedic hospital in the United States is the new structure of the Hospital for the Ruptured and Crippled, in East Forty-second Street, near the new Grand Central terminal, in New York City, built in 1912. It lacks nothing that could be desired in provision for the treatment and care of crippled children. Although it occupies a small piece of ground in the heart of a congested district it has a wonderful aspect of largeness and freedom. From the upper porches there is a fine view of the river. The wards are spacious and sunny; beautiful dining rooms and school rooms for children have been provided to break the monotony of ward life. Adjacent to each ward is an outdoor porch with an amount of space nearly equal to that of the ward itself.

The architect has preserved the artistic proportions and relations of the building without sacrificing any of the requirements of efficient administration or scientific surgery.

The leading examples of combined hospitals and convalescent homes are the Massachusetts Hospital School at Canton and the Widener Memorial School at Philadelphia. Of these, the Massachusetts Hospital School presents the more useful type, for the reason that the Widener School has a monumental character which led to a more elaborate style of architecture and equipment than would be desirable in an ordinary institution. The Massachusetts Hospital School provides for 250 children at a cost per bed for building and equipment of only $1,105 as against an

HOSPITAL FOR THE RUPTURED AND CRIPPLED, New York City. (See page 151)

Main Building

Coasting

Sleeping Porch in Stormy Weather. (See page 189)

New England Peabody Home for Crippled Children, Hyde Park, Mass.

average of $1,294 for similar institutions, and the per capita cost of care is only $291 per child as against an average of $348 for the institutions of this class. Yet the institution meets the requirements of the best modern standards in all respects.

An admirable feature is found in the Minnesota State Hospital and School and also in the Massachusetts Hospital School, whereby the children live entirely on the ground floor and the buildings are so constructed as to allow the easiest possible ingress and egress for children on crutches or wheel chairs. This arrangement greatly facilitates outdoor life.

Examples of strictly convalescent homes are the country branch of the New York Orthopædic Hospital at White Plains, the Minnesota State Hospital and School at Phalen Park, and the Convalescent Home for Crippled Children at West Chicago, Illinois. These are all new institutions, built expressly for the purpose for which they are used.

All three of these institutions should be studied by those who contemplate similar plants, as each of them has points of special excellence and each can be improved upon in some ways.

Of the 13 asylum homes only five have buildings which were erected for the purpose, the others occupying buildings originally designed as residences. Of the five, the two which probably come nearest to the ideal are the House of the Annunciation for Crippled and Incurable Children in New York City, and the New England Peabody Home for Crippled Children at Hyde Park, Massachusetts.

STATE HOSPITALS FOR CRIPPLED CHILDREN

When the first state hospital for crippled children was established in Minnesota in 1897, it found its precedent in the Illinois State Eye and Ear Infirmary, established many years ago, strictly as a preventive institution, to give treatment to children suffering from diseases of the eyes and ears. It was recognized that while crippled children living in large cities like St. Paul and Minneapolis stand a good chance of relief in hospitals, there are multitudes of crippled children living on farms and in villages, entirely beyond the reach of orthopedic surgeons. Their parents have no knowledge of orthopedic surgery and no means of meeting

the expense of surgical treatment if they had the knowledge. These children live lives of suffering and grow up hopelessly handicapped.

The Minnesota State Hospital brought the highest surgical skill and the most efficient hospital care within the reach of every crippled child in the entire state, and in the sixteen years since the hospital was established not only its human but its economic value has been amply indicated. Hundreds of children who would otherwise have become a permanent burden either upon their friends or upon the community at large, have been cured and have been fitted to become independent citizens. The state institutions of Massachusetts and Nebraska also have demonstrated their usefulness.

The New York State Hospital has been overshadowed by the numerous private institutions for crippled children in and around New York City, but it covers a most important field which is not reached by the private institutions. The institutions of New York City do very little for crippled children in the rural districts and it is the office of the State Hospital to provide for their needs. The spirit of the hospital is admirable, and it has already justified its creation. It has been handicapped by lack of sufficient appropriations, but it will doubtless serve a beneficent purpose for the children of the rural communities as soon as the legislature shall provide adequate means.

We have no hesitation in advocating the creation of a state hospital for crippled children in every state in the Union. In no other way can the multitudes of crippled children outside of the large cities be reached. The need of such hospitals is greatest, however, in those states where there are few, if any, competent orthopedic surgeons. Such surgeons are found only in the large cities because smaller cities do not have a sufficient number of cases to afford a livelihood to competent men.

Our study shows that there are no institutions for crippled children west of Omaha except in Seattle, and none south of Baltimore. Some orthopedic work is done in general hospitals of the South and West, in cities like Charleston, Atlanta, New Orleans, Galveston, Los Angeles, and San Francisco, but that work leaves the rural districts untouched.

ADMINISTRATION BUILDING, MASSACHUSETTS HOSPITAL SCHOOL, Canton, Massachusetts. (See page 161)

Rotunda, Hospital Building

Sleeping Ward

Outdoor Class. (See page 161)
MASSACHUSETTS HOSPITAL SCHOOL, Canton, Massachusetts

It is not only necessary to establish state hospitals but to institute systematic social service for crippled children who are dismissed from general hospitals or who are now in almshouses, orphan asylums and in families. In many cases parents refrain from seeking surgical help for their children because of an ignorant horror of surgery and hospitals. Such cases can be reached only by the patient efforts of physicians and social workers to remove these apprehensions. There are large numbers of crippled children in rural communities who will never receive proper care unless they are sought out and taken to a suitable institution.

STATISTICAL INFORMATION

Particular attention is called to Chapter V, Statistics, together with the nine statistical tables at its close.* This information is intended for those who are carrying on institutions for crippled children and especially for those who contemplate the establishment or enlargement of such institutions.

The average number of children cared for during the year recorded was: in the 10 hospitals, 662 children; in the 14 convalescent hospitals or homes, 945 children; and in the 13 asylum homes, 361 children—a total of 1,968.

The number of employes was 847, which was one for every 2.3 children. The ratio of children to employes was, in the hospitals, 2.0 children to each employe; in the convalescent hospitals or homes, 2.4; in the asylum homes, 3.1. It requires twice as many employes in proportion to the number of children to care for crippled children as it does to care for dependent or delinquent children in institutions. Many of these employes are trained nurses or other specially trained people, necessitating the payment of a high scale of wages.

Owing to the fact that most of these institutions are new and are in process of evolution, the physical plants consist in many cases of residences or other buildings which were originally erected for some other purpose. But, as we have seen, new and admirable buildings have been erected for six or eight institutions.

* See pp. 91–140.

Ground plans of some of the more important buildings are presented herewith.*

The occupation of buildings not erected for use as children's hospitals or homes explains the great diversity in the amount of floor space available for different purposes in different institutions; but the averages approximate closely to the accepted standards of space needed for similar institutions. The provision for the accommodation of employes in most of the institutions for crippled children is much less adequate than in the institutions for dependent and delinquent children. This is an important matter, because in order to do their best work employes must have ample opportunity for rest and recuperation. It should receive careful attention in all planning for future institutions.

The cost of the plants for crippled children has varied widely, thus far, because of the undeveloped condition of most of the institutions. The cost of land and buildings and equipment ranges all the way from $300 to $5,200 per bed; but it is possible to discover reasonable standards.

The cost of hospitals per capita is more than twice that of the convalescent hospitals or homes and two and one-half times that of the asylum homes. The new convalescent hospitals or homes have cost as follows:

West Chicago (Illinois) Convalescent Home	$1,800 per bed
Massachusetts Hospital School, Canton	$1,100 per bed
Minnesota State Hospital and School, Phalen Park	$1,135 per bed
Country Branch of the New York Orthopædic Hospital, White Plains	$3,230 per bed
Pittsburgh Industrial Home for Crippled Children	$2,200 per bed

A satisfactory convalescent hospital school or an asylum home for 100 to 200 children need not cost more than $1,200 to

* The study of institutions for crippled children brings out clearly the fact that, while a modern plant of fireproof buildings constructed with reference to maintaining sanitary conditions and arranged to facilitate convenient and economical operation is exceedingly desirable, nevertheless, admirable work can be done and excellent results accomplished with a very imperfect plant if there is efficient administration. For example, the New York Orthopædic Hospital is doing hospital and dispensary work of the highest order in a row of tenement houses constructed without any reference to the purpose for which they are now employed.

$1,500 per bed, though a cost of $1,800 to $2,000 per bed is not necessarily extravagant.

The asylum homes are all small. The Virginia T. Smith Home for Incurables at Newington, Connecticut, is the only one yet established which has a capacity of more than 50 children. It is desirable that the asylum homes should continue to be small. It is significant that those now in existence provide for a united capacity of only 409 children as against 1,219 in the convalescent hospitals or homes and 846 in the hospitals for crippled children. The asylum homes ought to accommodate only children who are homeless, whose own homes are entirely unsuitable, or whose condition makes necessary the asylum care. The experience of the child-placing societies proves that a considerable portion of the homeless crippled children can be successfully placed in good family homes where they can lead happy and normal lives; but there are many cases of infantile paralysis, syphilitic children, and so forth, where the placing-out method is inapplicable.

The statistics show that the care of crippled children is necessarily expensive. The lowest rate per capita in the hospitals is $233 per year, but that is in an institution with a very inadequate force of employes. The average rate per capita is $570 per year. The lowest rate in the convalescent hospitals or homes is $153 per year, but that again is in an institution with an inadequate force. The average in convalescent hospitals or homes is $348 per year (nearly $1.00 per day). The lowest rate in the asylum homes is $184 per year; the average, $267 per year.

THE VOCATIONAL PROBLEM

The vocational problem of the crippled child is both more and less complicated than we had been led to expect.

It is more complicated than we had anticipated because of the necessity of considering not only the individual bent of each child who is to earn a living for himself under a handicap, but also of considering his individual limitations. It is possible to select certain pursuits which are adapted to persons of limited strength, persons who are unable to work standing, or persons whose physical deformity makes them sensitive as to the observation of others. Excellent schools have been established for special vocational

training of crippled children, and these schools have selected a few trades like the jeweler's trade, wood carving, printing, and so forth, which are adapted to persons of limited strength who can not stand on their feet; but it has been found that only a few crippled children are willing to avail themselves of this highly specialized instruction, and notwithstanding earnest efforts, and the decided success of some of the pupils, each one of these vocational schools reports that it has been unable to find pupils to avail themselves of some of the opportunities that are open.

On the other hand, the vocational problem is being very greatly simplified by the rapid advances made in orthopedic treatment. The urgent importance of applying orthopedic treatment in the earliest stages of the disease is being emphasized, and as a result there has been a great diminution of the average age of children in some of the best orthopedic hospitals. The aim now is to get the child very young and to cure him and restore him to his natural environment before he is old enough to receive any vocational training whatever. The child being restored to health, even though he may be somewhat lame, is able to work out his own vocational problem. At the Country Branch of the New York Orthopædic Hospital, for example, the vocational brace shop which was being carried on enthusiastically three years ago is closed, for the reason that the boys in the school at the present time are too young to be taught that kind of work.

It is our hope to undertake a study of vocational training of crippled children as follows:

First, to study in detail such special vocational training as is now being given in institutions for crippled children.

Second, to study the work of the small number of vocational schools which are designed for crippled children.

Third, to study the history of a large number of cripples who have been under treatment in hospitals or convalescent homes for crippled children during the past ten or fifteen years and to ascertain how the vocational problem had been met in actual experience. In this way we hope to discover to what extent special vocational training is required for crippled children and how best to apply such training to their needs.

FUTURE OF THE MOVEMENT

The future of the movement in behalf of crippled children is clearly indicated by what has already been done. The usefulness of the work has been demonstrated, not only as a means of abating a vast amount of cruel and needless human suffering, but also as an economic measure to preserve to the community a great number of useful and effective individuals who would otherwise become hopelessly dependent.

Miss Reeves has recognized five different forms of work for crippled children: orthopedic hospitals, convalescent hospitals or homes, asylum homes, dispensaries, and special day schools. It appears from her study that the strictly hospital needs of crippled children have been more nearly met than the needs for the other forms of work mentioned.

We shall continue to establish private orthopedic hospitals because they appeal legitimately to the generous instincts of wealthy men and women, and because they afford such opportunity as can not otherwise be given to develop and produce the spirit of courage, hopefulness, and self-reliance which has characterized these institutions.

We shall continue to build convalescent homes for cripples, in the country, at the seashore, or in the mountains, chiefly as auxiliaries to orthopedic hospitals. We shall do this because experience has shown that the period of convalescence in orthopedic cases, especially those involving tuberculosis of the bones, is a slow process. We are learning that it is a cruelty to give a child the benefit of the skill of the orthopedic surgeon and then leave it to relapse into its former condition for lack of proper care and food. We are learning that convalescence can be much better promoted in the country branch than within hospital wards. Convalescent homes have already been established in connection with several of the orthopedic hospitals and still others are proposed.

It is a significant fact that the New York Hospital for the Ruptured and Crippled and the New York Hospital for Deformities and Joint Diseases are both planning the establishment of convalescent branches in the country.

From an economic standpoint the convalescent home can be

maintained at a less cost; it will shorten the period of convalescence and increase the number of permanent cures. The study indicates that convalescence is promoted by dealing with the children in small groups and in small cottages; also that special educational facilities must be provided, as a rule, because of the long period often necessary for the entire cure of bone tuberculosis.

In a paper read in 1909 by Dr. Newton M. Shaffer, formerly surgeon-in-chief to the New York State Hospital for the Care of Crippled and Deformed Children, he said: "The bringing together of a large number of children, especially this class, should be discouraged. The family of destitute, crippled and deformed children in hospital or school life should not exceed, in my judgment, more than 30 or 40, and great care should be exercised in the selection of those in control."

We shall continue to build asylum homes for a limited number of homeless crippled children and children of the poor who are manifestly incurable; but we shall jealously guard the brave and independent spirit of these children and carefully avoid creating the spirit of dependence or pauperism. Thus far nearly all of these asylum homes have kept the children in small groups where they have lived in dwelling houses under conditions closely approximating those of the ordinary family. This admirable practice should be maintained. The massing of large numbers of children in institutions and dormitories is injurious even for those who are normal, but it is especially undesirable for crippled children, who can not thrive in crowds.

We shall continue to develop state hospital schools and state convalescent homes for crippled children, following the example of Minnesota, New York, Massachusetts, and Nebraska. Preliminary legislation for such institutions has been adopted in Ohio and Illinois. Michigan and Wisconsin are caring for a small number of cripples in their state homes for dependent children. No other plan has been developed which meets the needs of the rural crippled child, and no other plan seems likely to provide care for crippled children in those states which have no large city to afford practice for high grade orthopedic surgeons.

This is especially true in the great western states where most of the people live in scattered towns not large enough to have an

MASTER OF HIS FATE. (See page 148)
New Jersey Orthopaedic Hospital and Dispensary, Orange, New Jersey

AN OUTING. (See page 146)
Nebraska Orthopedic Hospital, Lincoln, Nebraska

"Happy Haven" of Chicago, Summer Camp. Twin Lakes, Indiana. (See page 187)

orthopedic surgeon, or in farming districts, remote from the centers of population, because supervision by surgeons and trained nurses can be secured only by residence in the institution, both for operative treatment and for subsequent convalescence, with school opportunities. Massachusetts and Minnesota have demonstrated the practicability of furnishing the best care and treatment in a state institution at a moderate cost both for equipment and administration, avoiding institutionalism or mischievous partisanship.

We shall continue to maintain dispensary service, in connection with the orthopedic hospitals, for such children as can receive proper care in their own homes; but, as far as possible, we shall seek for such children the benefit of the orthopedic hospital and the convalescent homes, because of the difficulty of securing efficient execution of the surgeon's orders in private families, even among fairly intelligent people. The efficiency of dispensary service will be greatly improved by the development of the best possible social service and visiting nursing service in connection with the dispensary.

It is a difficult social problem to secure in the home of poor parents even the minimum of comfort, fresh air, nutritious food and cleanliness which are required for successful convalescence of a child with bone tuberculosis or infant paralysis; but an efficient trained nurse may accomplish much through appeals to the affection of parents and through judicious assistance to secure proper food.

Parents can thus be encouraged and stimulated to follow more faithfully the directions of the surgeon, and unfavorable or unsanitary conditions in the child's home can be corrected; or, if that can not be done, the parents may be induced to send the child to the hospital.

We shall continue to maintain special schools for crippled children in the great cities as a necessary corollary to the dispensary system. These schools will include special omnibus service, outdoor school rooms, luncheon service with special diet prescribed by the physician, and separate play places to protect the children from accident, injury, and annoyance. Close medical supervision will be an essential feature of such schools.

We shall develop in every state a plan whereby crippled children shall be discovered in the earliest stages of their disease, in order that the disease may be more readily cured. The best hospitals are using every means to reach the children while they are small and to keep them under care long enough to eradicate disease and in every possible case to fit them for self-support.

This work will always be expensive because of the necessity for roomy, well equipped buildings, and a generous diet, including butter, eggs, and milk. The helplessness of the inmates necessitates a large staff of reliable and trained employes. But the community will cheerfully meet the expense because of the beneficent results attained in the relief of little children from suffering and their development into useful citizens.

We shall emphasize, more and more, as the work develops, the fact that a crippled child, like any other child, is not simply an isolated "case" for surgical treatment or a "special problem" educationally, but is also a human being. His development toward the standards of normal living is possible only if he is considered as a member of a family and part of the community as a whole. The Association for the Aid of Crippled Children of New York has done pioneer work in the propagation of the idea that organizations working for crippled children must have not only standards of physical and educational care, but social standards as well. The service of such organizations is not only in the work they themselves do directly, but in their power of forcing upon the attention of the surgical world and of all other persons working for cripples, the essential fact that the development of a crippled child, as of any child, must be regarded as a whole, including physical, mental, and also moral and social growth.

The Russell Sage Foundation will cheerfully furnish specific information to anyone who is contemplating the development of any form of work for crippled children.

WIDENER MEMORIAL SCHOOL, Philadelphia. (See page 173)

Entrance

Front View

Rear View

WIDENER MEMORIAL SCHOOL, Philadelphia. (See page 173)

CHAPTER I

THE SCOPE OF THE STUDY

IT was originally proposed that this study should cover only the educational work for crippled children in the United States, with special attention to existing opportunities for vocational training,* but the scope of the study has been extended to cover also all phases of the physical care of the children, except technical questions of surgical and medical treatment.

Articles concerning many individual institutions and, in a few cases, discussions covering all the institutions in very brief fashion, have appeared in medical journals and occasionally in magazines or newspapers with wider circulation. Some of these articles have been reprinted as pamphlets. Valuable accounts of institutions, especially those in foreign countries, have been written by Douglas C. McMurtrie of New York, who has published an extensive bibliography on the whole subject of the care of crippled children, covering books and articles in many languages.† But no publication which has thus far appeared treats comprehensively all phases of work for crippled children in the United States, based upon detailed information from all the institutions.

In securing material for this handbook, each of the 37 institutions scheduled has been visited; most of them have been visited several times. Many of the surgeons, superintendents, teachers, and other employes, have given liberally of their time and attention, placing every possible fact of interest concerning their work at the writer's disposal.

* For the purposes of this handbook, we have accepted the definition of vocational training approved by the board of managers of the National Society for the Promotion of Industrial Education, in February, 1913, as follows: "Vocational training includes all forms of specialized education, the controlling purposes of which are to fit for useful occupations."

† McMurtrie, Douglas C.: Bibliography of the Education and Care of Crippled Children: A Manual and Guide to the Literature Relating to Cripples, together with an Analytical Index. Published by the author, New York, 1913.

but a limited value if only the information required by this definition were secured. There is far greater value in any census made and interpreted by surgeons who understand the different causes of crippled conditions (as was the census in Birmingham), because the physical necessities and educational possibilities of children crippled from different causes vary so widely.

The broadest division of cripples is into two classes—maimed and diseased. The children maimed as a result of infantile paralysis, because of congenital deformities, or through accident, present a problem very different from that of the large number of children who have bone tuberculosis. Children who have become deformed through rickets resemble the first class in that their surgical treatment usually comes after the disease is no longer active, and in the fact that they can safely be permitted to move about as freely as they are able; but, in common with the tuberculous children, they need general building up of their strength in order to prevent the return of the difficulty.

Any information showing the relative proportion of different types of cripples would be highly valuable in indicating for what types of cases there is most liberal provision in existing institutions. But it is obviously as impossible to tell what proportion of the crippled children in the United States are deformed from various causes, or diseases, as it is to tell what is the total number of crippled children in the country. The hospital records which show the classification of cases are suggestive but not final on this point, because it is probable that some kinds of cases seek hospital attention more quickly than others. It would be necessary to combine the medical statistics of many orthopedic hospitals in order to secure proportions between the different kinds of cases which would be likely to come at all close to the proportions existing throughout the country, because individual hospitals are apt to receive the kinds of cases for whose treatment they are especially known. The Birmingham census, already mentioned, is the only statement of which we know of cases taken from the general population and not from the records of particular hospitals. Among 721 crippled children under sixteen for whose cases the surgeons in charge had secured particulars, the proportion crippled from each specified cause is shown in the following table:

TABLE A.—CAUSES OF PHYSICAL DISABILITY OF 721 CRIPPLED CHILDREN. BIRMINGHAM, ENGLAND, 1911

(Not included in general statistical tables.)

Cause	Cripples	
	Number	Per cent
Tubercular disease	285	39.5
Infantile paralysis	175	24.3
Rickets	73	10.1
Congenital deformity	71	9.8
Apoplexy	33	4.6
Birth palsy	25	3.5
Accident	25	3.5
Scoliosis	13	1.8
Scattering	21	2.9
Total	721	100.0

TREATMENT AND AFTER-CARE

The term "cripple" includes cases with such widely varying needs that the institutions for cripples are of several different types. It may be said in general that the crippled children who are maimed or deformed but have no active disease need, first, operative measures which will give them the greatest use of their muscles or make the deformed limbs as nearly straight as possible. After recovery from operations they can in many cases return to their homes, if they go frequently to dispensaries for the adjustment of braces and appliances. These are the children whom it often seems best to educate through day schools for cripples. But children who have had rickets and all those with bone tuberculosis need to live for a considerable time where the general living conditions as to food, air, and sun are the best. These children form the largest proportion of the number cared for in convalescent hospitals, usually located in the country.

There are a limited number of incurable cases cared for permanently in asylum homes. Very few of these cases were hopelessly deformed at birth or otherwise really incurable; most of the so-called "incurables," except a small proportion of badly paralyzed cases, are children who were not treated in time but who, if they

had been brought to a surgeon's attention when their difficulty was first discovered, could have been greatly benefited and ultimately enabled to care for themselves to such an extent that residence in an institution would not have been necessary.

That the family home is the best place for well children is now generally recognized. But crippled children are conceded to be a special class, requiring in many cases surgical operations and in most cases very close physical supervision for months, often years. It is admitted to be inevitable that operative cases must go to the hospital, but there is not general agreement as to what should be done with children well enough to leave the hospital who still need careful attention for a long period. Some surgeons insist that parents can not be trusted to adjust a child's brace or even to bring him to the dispensary at the time ordered by the doctor. Some go so far as to say that the treatment of joint tuberculosis through a dispensary benefits the patient very little, and that such cases must always be looked after in convalescent hospitals with the constant oversight of nurses and physicians. Some of the asylum homes covered by this study provide a degree of medical care which is believed to be greater than the children would receive if they were in family homes. Children may be placed in such homes from the same motives which cause others to be sent to convalescent hospitals.

Children who do not require special medical attention are often placed in the asylum homes chiefly because the persons interested do not know what else to do with them. They believe that places can not be found for crippled children in family homes because they are less attractive to look upon than other children. While not denying the probable truth of this contention in some cases, we must state our belief that a considerable number of the children not requiring medical care who are now in asylum homes for cripples might be placed with families. The New York Home for Destitute Crippled Children was closed as an asylum home for crippled children in the spring of 1913. The building is now used by the Children's Aid Society of New York as a temporary receiving home for children who come into its care. Of the 20 crippled children in the home at the time of the change in its work 19, or all but one, were placed by agents of the Children's Aid

Society within one month in homes of relatives. Most of the children will probably live in surroundings much less attractive than those furnished by the home, but the change seems a commendable one. It would be well if other asylum homes would consider carefully the character of the cases they admit and refuse those not genuinely in need of institutional care. This would leave more openings for children who need such care.

Many people interested in work for crippled children, whose viewpoint is not strictly technical, object to sending children to any institution for a period which may extend to five or six years, because children who live so long in an institution atmosphere will become "institutionalized." This objection is somewhat met by the rejoinder that crippled children in family homes are not usually treated as other members of the family are; that they are petted, or in some cases neglected and despised, if they live at home. When this is true, the child has certainly never known the normal family atmosphere; and it is possible that his relation to other people would be more natural in an institution where the other children are also crippled and no one receives either disproportionate kindness or unkindness. The psychological question as to whether cripples would better associate chiefly with other cripples or in part with normal children is argued strongly on both sides. Some would keep crippled children segregated so that they may not be too sensitive in regard to their disabilities or hurt by seeing sound children do things they can not do. Other people believe that segregated cripples always become abnormal in their point of view; that they need contact with others who associate more actively in the life of the world.

It is not intended to give in this handbook final answer to these difficult questions. It is our conclusion that both systems of organization in the care of convalescent crippled children are needed, especially in very large centers of population. Some children should be kept in convalescent hospitals or homes, preferably in the country, throughout their period of convalescence. Others may quite safely live at home, being cared for physically through a dispensary, and may attend day school classes, either public or private. Each of the larger cities in America should have day school classes for crippled children who are disabled but

not diseased, and also for some of those who are still diseased, as with bone tuberculosis, but who have fairly good homes and parents with enough intelligence to follow the instructions of a visiting nurse.

Four sets of facts must be clearly comprehended in choosing between these alternatives for each individual child:

First, What is the physical condition of the child who is being considered? The nature of his physical difficulty and the degree to which he needs supervision by surgeons and nurses are the most vital points. On this question the surgeon's decision must be taken as final and it seems undeniable that a great number of children with bone tuberculosis can be cured as rapidly as possible only with continuous supervision in a convalescent hospital.

Second, What kind of a home has the child, and what kind of care will he receive if he does not go to an institution? This depends upon housing conditions, the sort of food the child will get at home, and the probable intelligence of his parents in carrying out the doctor's orders about fresh air and other conditions necessary for the child's health, as well as upon faithful visits to the dispensary.

Third, What degree of physical supervision will the child have if he remains at home instead of going to an institution? The existence of an efficient system of visiting nursing in connection with the hospital to which the child is taken is the necessary prerequisite for successful dispensary work. When there are visiting nurses many children may stay at home who would otherwise need to go to a convalescent hospital.

Fourth, What are the standards of the institution to which the child may be sent? Those who fear that residence in an institution for cripples would unfit the child to make his way in the world as well as if he stayed in a family home, ought to consider with care certain definite points. The number of children in the entire institution should be learned; if there is a cottage system, the number of children in each cottage, the number of beds in each, and the amount of space between them; how many sit at each table in the dining room and whether the chairs, dishes, and utensils create a homelike atmosphere; whether or not there is uniform dress. These details are not given as absolute criteria

VICTOR OVER PAIN. (See page 169)
St. Charles Hospital for Crippled Children, Port Jefferson, L. I.

A BRAVE SOLDIER. (See page 159)
Kernan Hospital and Industrial School for Crippled Children, Baltimore

GARDENING
Holy Cross House, Cleveland, Ohio. (See page 197)

"A HIKE"
Summer Home for Crippled Children (Conducted by Post-Graduate Hospital of New York), Southampton, Long Island. (See page 222)

as to the quality of the institution, but are suggestive pointers. The vital element is not dependent alone or chiefly upon these material details, for it is the personality of the employes which after all determines the elusive thing called "atmosphere." Some of the hospitals gave the visitor an impression of greater homelikeness than did some of the places called "homes."

The succeeding chapters will give in some detail the resources and methods applied by all these different agencies for the physical care, the education, and the vocational training of crippled children. The work of residential institutions and non-residential agencies is treated in the chapter on Physical Care; the public school classes and educational work in residential institutions are discussed in the chapter on Education; the work of the private day schools in the academic education of crippled children is also covered in the chapter on Education, their vocational training, in the chapter on that subject.

The names and locations of the residential institutions working exclusively for cripples and open all the year, and certain general facts concerning the nature of their work, are shown in the tables.* It will be seen that the majority of the institutions are in or near the great centers of population—New York, Chicago, Boston, and Philadelphia. The smaller number of institutions in other states are usually in or near the largest city. A striking fact regarding the geographical location of the institutions is the absence of any institution for cripples, so far as we can learn, farther south than Baltimore, and the fact that the Children's Orthopedic Hospital in Seattle, Washington, is the only one farther west than Lincoln, Nebraska.

Of the 37 institutions, we have, as has been stated, classed 10 as hospitals, 14 as convalescent hospitals or homes, and 13 as asylum homes. This classification is not borne out by the names of all of the institutions. Some of the early hospitals were organized many years ago as homes for crippled children, and the old titles have been retained since the institutions developed into hospitals. A number could easily be classed in either of two of the three groups. It has been necessary, therefore, to put each institution into the group whose general type it most nearly resembled.

* See pp. 108–140.

The characteristics which have controlled the assignment into the several groups may be broadly stated as follows:

Hospitals are of necessity located in large cities, and have about the same average number of patients as the convalescent hospitals or homes, but considerably more than the asylum homes. They are served by orthopedic specialists and have operating suites where all kinds of orthopedic operations may be performed. The patients receive care according to hospital standards during convalescence, with attention from nurses, some of whom are graduate nurses. There is no restriction as to color in any of the institutions we have classed as hospitals. The age limits for admission and discharge are usually more flexible than in the other institutions; the period of stay is considerably shorter. School work is usually but little developed.

Most of the convalescent hospitals or homes are located in suburban or country localities. They sometimes have operating rooms of their own, but more often receive cases after operations at hospitals in the city. There are fewer surgeons and nurses in proportion to the number of children. About half of the institutions take white children only. The age limits for admission are more definite and there are fewer opportunities for children under three or four years of age. The most striking difference between the convalescent and the regular hospitals is the longer period of stay permitted in the convalescent hospitals. It is usual to keep each child as long as he needs the care offered, up to a period of several years, and sometimes even after his cure is completed, for purposes of education in the schools which are usually connected with convalescent hospitals.

Asylum homes for the custodial care of children crippled permanently or likely to be so for long periods are usually in residential sections of cities or in suburbs. They are much smaller than any of the other institutions and offer only a minimum of special medical care. The children are sent to hospitals for operative treatment. The homes themselves sometimes have one graduate nurse, sometimes none. Seven out of 13 take only white children, and there is but one asylum home for colored children only. Age limits resemble those in the convalescent hospitals or homes. There is a tendency to avoid taking infants under two or three

years because of the special care they require. The large majority of the asylum homes have no rule as to the age limit of discharge and the children are commonly kept as long as they need a home, even in some cases for months or years after their physical cure has been completed and they have ceased to be crippled children. Some of these institutions send children to public schools; in other cases there is a school in the institution.

CHAPTER II

PHYSICAL CARE OF CRIPPLED CHILDREN

ALL efforts in behalf of crippled children must be based upon sound policies of surgical treatment and general physical care, which aim to cure the diseases and correct the deformities of the children whenever that is possible, and to return them to conditions of living on a plane with those of children who have not been crippled. It is equally true that for the crippled children whose handicaps can not be entirely removed, the first aim should be the elimination, in as large a measure as possible, of the difficulties which set them apart from children who have no physical defects.

SURGICAL CARE

The surgeon, in larger cities usually an orthopedic specialist, is sought first in the effort to help any crippled child. The surgeon's operative skill and his knowledge of the measures needed in the physical care of crippled children before and after operations and in cases requiring no operations, including the use of many kinds of mechanical appliances, like braces and plaster jackets, furnish the necessary foundation for all other work for crippled children.

Most of the residential institutions for the care of crippled children owe their inception to the desire of some orthopedic surgeon to furnish better opportunities to crippled children who are unable to pay for treatment. In most of the institutions visited the surgeons give their services without remuneration. It is true that the number of cases in a large free hospital affords an opportunity to keep in constant touch with all kinds of orthopedic work which few private practices furnish; also that connection with a well-known hospital adds to asurgeon's prestige and often brings him private patients. But in most cases the material return to the surgeon probably by no means balances the large

Main Hospital Building

Solarium. (See page 170)

STATE HOSPITAL FOR CRIPPLED CHILDREN, West Haverstraw, New York

Outdoor Sleeping Shack, Exterior

Outdoor Sleeping Shack, Interior

Outdoor Sleeping in Winter. (See page 170)

STATE HOSPITAL FOR CRIPPLED CHILDREN, West Haverstraw, New York

amount of time which he takes for free work. The writer desires to record with emphasis the impression that orthopedic surgeons in the institutions covered by this study take a deep interest in giving of their best skill to work for poor children, and in many cases sacrifice their own material interests in order to meet the appeal of cases which must be treated without compensation.

An increasing number of people are beginning to believe that it is not desirable nor right to expect surgeons to give their services freely to institutions doing charity work. The surgeon-in-chief at the New York State Hospital, who is also superintendent, and the surgeon-in-chief and assistant surgeon at the Nebraska State Hospital, the latter also its superintendent, receive yearly salaries. In several of the large city hospitals the more important members of the surgical staff are salaried. One of the convalescent hospitals, located so far in the country that the surgeon's weekly visit requires a full day of his time, gives him a yearly salary.

In most of these cases the amount received by the surgeons probably does not equal that which they could earn in the same time by private practice, but the payment of some definite salary is believed by many people to be a step in the right direction.

Each of the hospitals visited has a medical staff which includes orthopedic specialists who examine applicants for admission, perform operations in the operating suite in the hospital, and visit the wards frequently to watch the progress of the cases. If the hospital has a dispensary the surgeons are present on all days when the dispensary is open, to see new applicants for hospital care and to examine convalescent patients who live at home and are brought to the dispensary, usually by their parents.

All the hospitals are fully equipped with modern operating rooms, and, in most cases, with X-ray apparatus and laboratory equipment. Four of the hospitals have brace shops where appliances of all kinds are made in large quantities.*

All the convalescent hospitals or homes, with the exception of the Van Leuven Browne Hospital School, Detroit, have ortho-

* They are the Home for Destitute Crippled Children in Chicago; the Children's Hospital in Portland, Maine; the New York Orthopædic Hospital, and the Hospital for the Ruptured and Crippled in New York. The Nebraska Orthopedic Hospital and the Children's Orthopedic Hospital in Seattle have new brace shops with equipment which will be increased later.

pedic surgeons who visit the institutions at frequent intervals. In the majority of cases the surgeon has a weekly visiting day and spends at least an hour at the institution. At the Kernan Hospital School, Baltimore, the surgeon-in-chief, who is also superintendent, pays almost daily visits. During these visits the surgeon always examines the case most recently operated upon and is consulted by resident doctors and nurses concerning children needing special attention. At the Country Branch of the New York Orthopædic Hospital, White Plains, all of the children file past the surgeon-in-chief at each of his weekly visits, and he examines a certain proportion carefully each time that he comes. The careful examination of a limited number is usual in other places, but the cheerful procession of a hundred children who are greeted by the surgeon-in-chief personally and their general progress noted, is unique with the institution at White Plains.

The surgeons sometimes examine applicants at the convalescent hospital, sometimes at the city hospital of which the convalescent hospital is a branch, and occasionally in their own offices if it is more convenient for the applicant to come there when the convalescent hospital is located at some distance in the country.

Eight of the 14 convalescent hospitals or homes have operating suites and full hospital equipment, often including X-ray apparatus, and many operations are performed at the institutions themselves. Minor operations only are performed at the Van Leuven Browne Hospital School, Detroit. The other convalescent hospitals which have no operating equipment receive only children who have already been operated upon in hospitals, and cases not requiring operations. Only three of the eight convalescent hospitals mentioned as having operating suites do all their own operative work; namely, the New York State Hospital at West Haverstraw, the Sea Breeze Hospital at Coney Island, New York, and the St. Charles Hospital at Port Jefferson, New York.

Many of the children sent to the Massachusetts Hospital School at Canton have already received surgical attention at the Children's Hospital in Boston. Children who go to the Widener Memorial School are sometimes operated upon at the Hospital of the University of Pennsylvania, Philadelphia, whose chief orthopedic

surgeon is surgeon-in-chief at the Widener Memorial School. Operations for the House of St. Giles the Cripple, Garden City, New York, are sometimes performed at Brooklyn hospitals. In rare instances children from the Kernan Hospital School, Baltimore, have received their operative treatment at the University of Maryland Hospital, and the new Children's Hospital School near Baltimore may send cases occasionally for operations at the Johns Hopkins Hospital. In these cases the surgeon-in-chief is connected with both institutions. Operations upon children who later go to the convalescent hospital are sometimes performed at the city hospital for the advantage of medical students. Braces used for children at the convalescent hospitals or homes are usually made at the brace shops of city hospitals. The Widener Memorial School at Philadelphia has its own brace shop. The Country Branch of the New York Orthopædic Hospital has a fully equipped shop which is not now used, the braces for the patients being made at the city branch of the institution.*

Some of the asylum homes have orthopedic surgeons who pay regular visits at long intervals; in others routine visits are paid by a general practicing physician and the orthopedist is called upon when needed. None of the asylum homes have operating suites with complete equipment. Minor operations only are performed at the Home of the Merciful Saviour in Philadelphia, the New England Peabody Home, Hyde Park, Massachusetts, and the Home for Incurables, Newington, Connecticut. Major operations upon children from these homes and all operations upon children from the other 10 asylum homes are performed in city hospitals. Usually all operations for one asylum home are done at the same city hospital, generally at the one with which the orthopedic surgeon for that home is connected.

Seven of the convalescent hospitals or homes have resident physicians: the Kernan Hospital School near Baltimore, the Children's Hospital School in Baltimore, the Massachusetts Hospital School, the St. Charles Hospital at Port Jefferson, New York, the New York State Hospital, the Country Branch of the New

* Miss Charlotte C. Barnwell, of Baltimore, Maryland, has for more than thirty-five years made removable jackets of plaster of paris in her own home for incurable crippled children. This is a personal beneficence.

York Orthopædic Hospital, and the Widener Memorial School, Philadelphia. Only one of the asylum homes—the Home for Disabled Children at Maywood, Illinois, has a resident physician.

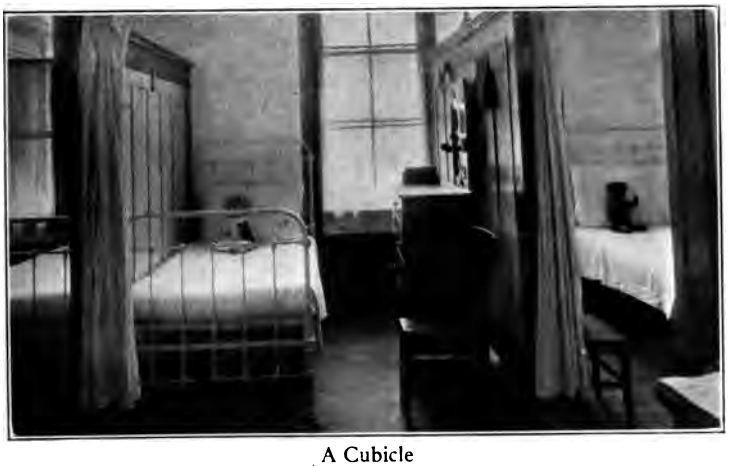
NURSING STAFF

All of the hospitals employ graduate nurses ranging in number from one to seven. The convalescent hospitals have graduate nurses, ranging in number from one to five, except the St. Charles Hospital at Port Jefferson, New York, the Country Branch of the New York Orthopædic Hospital at White Plains, and the Van Leuven Browne Hospital School, Detroit. The two first mentioned institutions have resident physicians, and their nurses receive training in orthopedic nursing at the institution, although there is as yet no formally organized training school granting diplomas. Four of the asylum homes have graduate nurses; namely, the New England Peabody Home at Hyde Park, Massachusetts; the Daisy Fields Home, Englewood, New Jersey; Holy Cross House, Cleveland, Ohio; and the Home of the Merciful Saviour, Philadelphia. There were two graduate nurses at Holy Cross House when this study was made, and one in each of the other three institutions mentioned.

In addition to the graduate nurses, all of the hospitals and convalescent hospitals and many of the asylum homes have other nurses with some special knowledge of the needs of orthopedic cases. In three of the institutions nurses in training in general hospitals of the same city come to the orthopedic hospital for limited periods, usually three months, in order to secure a knowledge of orthopedic nursing. Nurses at the Home for Destitute Crippled Children in Chicago come from the Presbyterian Hospital; those at the Children's Hospital School in Baltimore come from the Church Home and Infirmary; those at the Children's Orthopedic Hospital in Seattle come from one of the general hospitals in the city.

Two of the hospitals have formal training schools for nurses, granting diplomas which make the holders eligible to register as graduate nurses. A two-years' course is offered at the Nebraska State Hospital at Lincoln where there are 11 pupil nurses. At the Children's Hospital in Portland, Maine, 22 pupil nurses are

Bungalow Built by the Boys



A Cubicle

Staff Living Room. (See page 172)
COUNTRY BRANCH NEW YORK ORTHOPÆDIC HOSPITAL, White Plains

Milk Between Meals

The School

SUMMER HOME FOR CRIPPLED CHILDREN. (See page 222)
(Conducted by the Post-Graduate Hospital of New York), Southampton, L. I.

registered for a three-years' course, of which two years and a half are spent at the hospital itself and six months at Bellevue Hospital in New York, where the nurses undertake work for which there is not opportunity at the hospital in Portland. The Kernan Hospital School in Baltimore has a training school for nurse maids, with eight pupils taking a one-year course. The nursing training for the Sisters in charge of the St. Charles Hospital at Port Jefferson, New York, is now in process of formal organization and may result in the organization of a training school.

In the hospitals and many of the convalescent hospitals there are nurses or nurse maids on duty all night, who spend most of their time in or near the wards used by children needing the closest attention.

CARE OUTSIDE THE INSTITUTIONS

The medical and nursing care of the children not in residential institutions represents many degrees of effectiveness. In the day schools for crippled children there is usually a nurse who watches over the physical condition of the children during school hours, and in some cases goes to their homes. The nurses in private schools are paid by the society maintaining each school; other private organizations, like the Association for the Aid of Crippled Children in New York City, and the Sunbeam Circle in Cleveland, Ohio, furnish the nurses who go to public schools where there are special classes for crippled children. The Crippled Children's East Side Free School and the school maintained by Miss Spence's School Society, both in New York, have one provision not elsewhere found; an orthopedic surgeon holds weekly clinics at the school and the children have braces adjusted, plaster jackets applied, and all surgical work other than actual operations done at the school.*

But the most important provisions for medical supervision of crippled children not living in institutions are the dispensary services in eight out of the ten orthopedic hospitals studied and in one of the convalescent hospitals, which has a separate dispensary building in the city. Table IX† gives details of the work

* For detailed statements concerning the medical attention given in different day schools, see the chapter on Education.

† See p. 140.

of the nine dispensaries. The table shows a total of 34,392 different out-patients who visited the nine dispensaries as against 4,901 patients cared for as residents in the entire 37 institutions we have tabulated. The conclusion is obvious that when so very great a majority of crippled children receive medical attention through dispensaries, the importance of high standards in out-patient work can not be overestimated.

There are, of course, no concrete facts according to which the efficiency of medical care through dispensary service, as compared with that in residential institutions, can be estimated by a person without medical knowledge. But we record here the statement made by many different surgeons, that while dispensary care may be adequate for some cases, especially for those that do not have active disease, it can be safely substituted for institutional care only when the child is actually brought to the dispensary as frequently as the doctor orders, and when his directions for care at home are carefully followed. This is most necessary in cases of children with active tuberculosis of the bone. Many surgeons consider it impossible to treat a case of hip tuberculosis satisfactorily in a dispensary on the ground that the parents can not be trained to exercise the constant vigilance necessary to keep the brace properly adjusted.

The best aid to effective dispensary service is a staff of visiting nurses who follow the children into their homes, see to it that each child comes to the dispensary at the time ordered, visit the children at home between dispensary visits in order to adjust braces, apply surgical dressings, and, most important of all, educate the mother so that she may be able to supplement the care given by surgeons and nurses through as intelligent co-operation as possible. Of the nine institutions with dispensaries, five had recorded no visits paid to the homes of out-patients by visiting nurses during the year studied. Some cases from the Children's Hospital at Portland, Maine, are visited in their homes by an agent of the Maine Children's Committee, who has not had medical training but who is accustomed to examine general living conditions in homes where children are placed by the committee. Some visits to homes of out-patients are paid by the nurse in charge of the out-patient department of the Children's

Orthopedic Hospital at Seattle, Washington. Only three out of the nine institutions recorded a number of visits paid to homes by visiting nurses which was commensurate with the size of the dispensary service; namely, the New York Orthopædic Dispensary and Hospital, the New Jersey Orthopaedic Hospital and Dispensary, and the Kernan Hospital and Industrial School in Baltimore.

The system of supervision of dispensary cases developed at the New York Orthopædic Dispensary and Hospital is specially noteworthy since it has no parallel at any of the other large orthopedic hospitals. During the year 1912, four visiting nurses, of whom two were graduate nurses and two non-graduate nurses with special knowledge of the treatment of orthopedic cases, and one social service visitor without medical training, paid a total of 8,498 visits to homes of patients; and 7,020 visits were paid by surgeons connected with the hospital. There was, thus, a total of 15,518 visits to patients' homes as against 27,140 visits paid by the patients themselves to the dispensary. The exceptional thoroughness of the following-up of cases treated by this institution is evident from the fact that it is also the only one of the three large orthopedic hospitals in New York which has a convalescent hospital in the country for the long-time care of post-operative cases.

Several hospitals not covered by our tabulations are worthy of study for their provision of supervision for dispensary cases. Lakeside Hospital in Cleveland, Ohio, and Rainbow Cottage, a country convalescent hospital affiliated with Lakeside, employ an experienced graduate nurse who follows up all of their cases and goes, also, for three days each week in the school year, to the special public school for crippled children. This nurse is thus able to follow the same children from their first appearance at the hospital for operative care, through their convalescence and return to the measure of health which permits their attending school. The Hospital of the University of Pennsylvania has a social service department in charge of a college graduate without nursing training which includes, as one of the staff, a graduate nurse who visits the homes of orthopedic cases. The Post-Graduate Hospital in New York City has a graduate visiting nurse who, during the winter, gives her whole time to patients coming to the orthopedic clinic; during the summer months the same nurse acts as superintendent

of a summer convalescent home where some of the cases which she has followed during the year are taken for the summer. The Johns Hopkins Hospital in Baltimore has a social service director and assistant, but as a rule the orthopedic cases are left to the visiting nurse for that department, in order to avoid, if possible, sending more than one visitor to the same home. The Children's Hospital in Boston, Massachusetts, has a social service department in charge of one of its graduates who received additional training at the Boston School for Social Workers. She has several pupil nurses as assistants.

PHYSICAL CULTURE AND GYMNASTICS

In addition to the medical staff there are in many institutions, especially in the hospitals, masseurs and masseuses who give treatments to paralyzed children. Physical exercises are also given, sometimes under the direction of the people who give massage, sometimes by special teachers of corrective gymnastics. Five of the hospitals, or half of the number, namely, the Home for Destitute Crippled Children in Chicago, the Children's Hospital in Portland, Maine, and the three orthopedic hospitals in New York—the New York Orthopædic, the Hospital for the Ruptured and Crippled, and the Hospital for Deformities and Joint Diseases—have special gymnastic apparatus for use in this work.

The two convalescent hospitals in Baltimore have equipment for special gymnastics; the Widener Memorial School has the most complete equipment of any institution we have scheduled. Three other convalescent hospitals—the Massachusetts Hospital School, the New York State Hospital, and the country branch of the Minnesota State Hospital—have a few pieces of special apparatus. There is a small equipment at the Holy Cross House in Cleveland, one of the asylum homes.

Of the institutions visited but not scheduled, the Hospital of the University of Pennsylvania in Philadelphia has a completely equipped gymnasium, and the work is in charge of a specialist in teaching corrective gymnastics who has had long experience in the work. Some of the teachers of special gymnastics are graduates of schools of gymnastics, where they have taken courses to fit themselves to teach crippled children for whom special apparatus must

ORTHOPEDIC GYMNASTICS. (See page 155)
New York Orthopædic Dispensary and Hospital, New York City

SPECIAL GYMNASTICS BEFORE A MIRROR. (See page 149)
Hospital for Deformities and Joint Diseases, New York City

Playground

Outdoor Sewing Class

CRIPPLED CHILDREN'S EAST SIDE FREE SCHOOL OF NEW YORK, SUMMER HOME, Oakhurst, New Jersey. (See page 228)

be used and who must be allowed to undertake only the sort of exercises approved in advance by the surgeon. Most of the children who come to these gymnastic classes either have paralysis in some degree or have lateral curvature of the spine. For the paralysis cases the better equipped gymnasia provide a great variety of motor-driven machines for the exercise of different parts of the body. Apparatus, usually of a simpler sort, is used for stretching exercises by children with lateral curvature. The following is a statement of the very complete equipment for special gymnastics at the Widener Memorial School:

APPARATUS FOR SPECIAL GYMNASTICS IN THE WIDENER MEMORIAL SCHOOL, PHILADELPHIA, PENNSYLVANIA*

2 swinging rings with mattresses below them.
1 seat swing.
1 swing with 2 rods for seats.
2 large and 1 small punching bags.
1 jumping chair with springs.
1 vibrating machine with places for 3 feet or arms.
4 foot machines "for going round and round."
1 quarter circle for back exercises with a chest weight.
1 climbing rack.
2 hand machines with different sorts of wooden handles to be twisted.
1 English back board.
3 other pieces of apparatus for back exercises.
1 stretcher for head and neck.
1 trolley for walking exercises (used for children with paralysis of the legs).
1 jumping board and revolving rod (child holds on to the rod).
6 sets of pulley exercises attached to the wall.
2 straw couches for use in massage (1 low; 1 high).
1 plinth.
1 wooden gun.
A large number of dumb-bells, Indian clubs and wands.

Physical exercises without apparatus are often given by teachers in the day school classes for crippled children, and teachers of physical culture are sent to several of the asylum homes

* Non-technical terms have been used in this list as far as possible.

for crippled children in New York City by the People's University Extension Society. Several years ago there was a lively discussion among surgeons and teachers working for crippled children as to the desirability of physical exercises in the public school classes for crippled children in New York. There is difference of opinion still, but the majority of those interested in the discussion have agreed that the question is one which should be settled individually for each child; that most crippled children can do some physical exercises without danger of overstrain or the retarding of their physical cure, but that the nature of the exercises desirable for each child should be indicated by his surgeon. The record card supplied by the Department of Education of the City of New York for each crippled child includes spaces in which the child's physician may indicate in general how much and what kind of exercise the child should have, and indicate specifically the exercises he should not take and those which would most benefit him.

PHYSICAL CONDITIONS IN RESIDENTIAL INSTITUTIONS

In addition to the special equipment and trained employes provided by all of the organizations working for crippled children, there are in the residential institutions many provisions for general physical care such as are necessary for normal as well as for crippled children. All children need abundant nourishing food, appropriate clothing, the opportunity to breathe pure air both by day and by night, protection from infectious diseases, and an atmosphere of cheerfulness. All these elements are found in many family homes and in many institutions for dependent children who are not crippled, but we believe that it may safely be said that the institutions for crippled children have a higher average standard as to the provision of healthful conditions than do institutions where the children are not under medical supervision.

There is great difference between orthopedic surgeons as to the degree of their interest in the general living conditions affecting their patients; nurses are not always so devoted to the cause of fresh air as might be desired. However, it is our conclusion, based upon an acquaintance with all the institutions for crippled children in the United States, that the presence of an absolute standard of efficiency in one direction, that is, medical and surgical care, has

brought the interesting result of raising the standard of the institutions at almost all other points. It is generally true that the institutions where surgical and medical provision is most complete are likely to provide most effectively the general health conditions mentioned, with the exception in some cases of the homelike atmosphere, which is, of course, most noticeable in the small asylum homes with the least provision for medical care.

The majority of surgeons, nurses, teachers, and other specialists working for crippled children have a sufficiently broad view of the interests of those children to prompt a degree of attention to elements in their care which lie outside the special field belonging to each group of officers. Even the occasional visits of a surgeon to an asylum home may have an appreciable effect in encouraging good housekeeping, because the surgeon expects to find hospital standards of cleanliness.

Dietary

Much information has been collected concerning the dietary in the institutions visited, most of the records covering in detail the menus for a week or more. The meals of the children, officers, and servants are separately stated for the larger institutions, where the food served to the three groups of people varies. There is universal insistence by the surgeons upon an abundance of simple and nourishing food, especially for the children recovering from rickets and those who have or have had bone tuberculosis. Special diets are prescribed for certain children in the hospitals; this is done in rare cases, also, in convalescent hospitals. Some of the institutions have a regular order for the main dishes served at meals, which is changed at intervals. For example, the meats served at dinner at the Children's Hospital in Portland, Maine, run according to a list for two weeks; at the end of the second week the list for the first week is again followed, and so on. In most cases the order of appearance for each dish is not perfectly regular, except for the children whose diet has been especially prescribed. In convalescent hospitals and especially in the asylum homes, where efforts are made to make the atmosphere as much like that of an ordinary household as possible, and where the period of stay is longer than in the hospitals, the children have no more

idea in advance what will be served at any meal than they would have in most homes. Some of the smaller institutions are unable for financial reasons to furnish as liberal quantities of milk and eggs as they desire to the children; but in most of the institutions eggs and milk are very liberally used, and in many cases as much milk is given as the children can be induced to drink. Milk and eggnogs are often served between meals, especially for the tuberculous children. At the Sewickley Fresh Air Home, Sewickley, Pennsylvania, all the children who will drink it so often have milk at each of the three meals, in the middle of the afternoon, and at night just before they go to bed; they have fruit juice in the middle of the morning.

The menu lists show the usual breakfast to include cereal—most often oatmeal—with milk, bread or toast, milk to drink, and sometimes eggs. For dinner, which is everywhere served at noon, there is usually meat (beef and lamb are most used, with chicken for Sundays and holidays), potatoes, one and sometimes two other vegetables, and a simple dessert, very often bread or rice pudding. Supper is a very simple meal in practically all the institutions; it usually includes only bread and butter, milk or cocoa, stewed fruit, with the infrequent addition of eggs or some other one substantial dish.

It will be seen that the meals do not differ greatly from those provided for children in many households. They are usually planned by the matron or housekeeper, with general supervision by the doctor, who prescribes special diets. In a few institutions, including both the New York Orthopædic Hospital and its country branch at White Plains, the housekeeper is a trained dietitian.

Clothing, Air, and Sunlight

Where the institution has facilities for outdoor living on porches, the children have specially warm clothing for wear by day or night. The special equipment for outdoor schools is mentioned in the chapter on Education. The children who sleep out of doors wear, in the coldest weather, hoods and mittens; they have a large number of very warm blankets and sometimes sleep in sleeping bags.

Aside from these special provisions, in some institutions the

children who are able to be dressed during the day wear clothing provided by the parents or friends of the child. In other cases clothing is furnished entirely by the institution. At some places the parents supply as much suitable clothing as they are able to buy and the institution furnishes other needed articles. Where clothing is furnished from the children's homes it is usually disinfected before it is used in the institution. On the ground of possible infection, some of the institutions refuse to accept clothing even when the parents are willing to furnish it.

In none of the institutions was there an altogether uniform dress, although the checked aprons of the girls, and the dark blue blouses of the boys in a few of the institutions where garments are secured in large numbers by the institution itself, or given by guilds of women who sew, presented little variety in appearance. Many of the officers in the different institutions called special attention to the fact that there was no uniform dress, and in some cases variety was sought as much as possible. Most of the institutions have lockers or other provision for the garments of the different children and each child has his own clothing. In a few places underclothing and garments for everyday wear are arranged by sizes only, when the clean garments return from the laundry, and the individual children do not always receive the same clothing.

Fresh air and nourishing food are the two elements conceded to be necessary for upbuilding the strength of tuberculous children, and highly desirable for other children as well. Eleven* of the institutions studied have provisions for outdoor sleeping for a part or all of the children. At the New York State Hospital at West Haverstraw, and at the Van Leuven Browne Hospital School in Detroit, there is provision for outdoor sleeping in shacks. The New York State Hospital has also one pavilion more substantially built but with windows on all sides, which affords the equivalent of outdoor sleeping. The Home for Destitute Crippled Children in Chicago has 30 beds on a flat glass-covered roof, with skylights which can be dropped so that excellent ventilation is secured. The Industrial Home for Crippled Children in Pittsburgh

* Since this study was made, St. Charles Hospital at Port Jefferson, New York, has provided outdoor sleeping space for 28 children.

has two pavilions with 14 beds each, which have cross ventilation from windows which take up practically the entire wall space. There are porches for outdoor sleeping at the Nebraska Orthopedic Hospital, the Hospital for Deformities and Joint Diseases in New York, the Convalescent Home at West Chicago, the Children's Hospital, and the Kernan Hospital School in Baltimore, the Home for Incurables at Newington, Connecticut, and the New England Peabody Home at Hyde Park, Massachusetts.

The dormitories at the Massachusetts Hospital School with their monitor roofs, and the wards in some institutions, particularly the Widener Memorial School at Philadelphia, which have cross ventilation from many windows, provide ventilation so perfect that sleeping porches are not considered necessary.

Thirteen of the institutions have special rooms for use by day which are entirely or almost entirely open to the outdoor air. Sometimes they are flat roofs without covering; sometimes there is a covering overhead but no walls; sometimes the rooms are glass-enclosed with windows which can be dropped except at times of storm, so that there is no interference with the currents of air. The great porches and roof space at the new Hospital for the Ruptured and Crippled in New York are the most striking example; they represent nearly as great a space as that occupied by the indoor rooms used by hospital patients. The other institutions whose buildings provide special outdoor space are the Children's Hospital in Portland, Maine, the New York Orthopædic Hospital, the Country Branch at White Plains, the Children's Hospital at Baltimore, the House of St. Giles at Garden City, New York, St. Charles Hospital at Port Jefferson, New York, the Home for Incurables at Newington, Connecticut, the Home for Disabled Children at Maywood, Illinois, the Crippled Children's Home at Buffalo, Holy Cross House at Cleveland, the Widener Memorial School in Philadelphia, and the House of St. Michael in Philadelphia.

It must not be forgotten that results can not be foretold from a knowledge of the mere facilities for securing fresh air unless one knows, also, how those facilities are used. Some of the porches listed as providing outdoor space have windows so arranged that they can be completely closed in case of storm. If these windows

Outdoor Sleeping Porch

Class in Basketry

A Weaver

KERNAN HOSPITAL AND INDUSTRIAL SCHOOL FOR CRIPPLED CHILDREN,
Baltimore, Maryland. (See page 159)

Dormitories

Covered Walk. (See page 161)
MASSACHUSETTS HOSPITAL SCHOOL, Canton, Massachusetts

are not kept open the children may not secure "outdoor" air so effectively as in an ordinary ward with many windows which provide cross ventilation, if those windows are always kept open. The Hospital for Deformities and Joint Diseases in New York has a children's ward whose windows had not been closed during five years previous to our visit. The Crippled Children's East Side Free School of New York is noteworthy among day schools because its windows are kept open throughout the year.

At the meeting of the Federation of Associations for Cripples in New York City in April, 1913, there was a discussion of outdoor school rooms and school rooms where windows are kept open in winter, which brought out sharp differences of opinion as to whether or not cold temperatures have a bad effect upon the children's physical condition. Most of the surgeons seemed to agree that cold in itself was never harmful if the child were warmly dressed and had plenty of good food. This has been found to be the attitude of other surgeons met in the course of the study.

The search for pure air as one of the necessary elements for the strengthening of tuberculous children has been the chief factor in causing some city institutions to move to country locations or to establish country branches. Others which have not changed the location of their plant send as many as possible of their patients to fresh air homes, or to special summer homes for crippled children, during the hot months.

Some surgeons believe that there is special benefit for tuberculous children in sea air. Sea Breeze Hospital was established at Coney Island, New York, because of this belief, and its medical officers think that the results prove the great advantage of the seashore as a site for these institutions. Several summer homes for crippled children have been located near the sea. At all these places the majority of the children bathe in the ocean. Some surgeons believe that the salt water is useful in hastening the healing of tuberculous sinuses. At the summer branch of the Providence (Rhode Island) Hospital, children who are kept on Bradford frames are put upon a special frame, carried to the beach, and dipped into the water.

More recently there has been considerable discussion of the value of sunshine for sick children, especially tuberculous children.

In several places in Europe, particularly in Switzerland, children with tuberculous sinuses are exposed to the direct rays of the sun, and the surgeons state that the sinuses have healed with unprecedented rapidity. This method of treatment is in constant use at Sea Breeze Hospital, and has also been used at the summer branch of the Providence Hospital and by the orthopedic surgeons at the Allegheny General Hospital in Pittsburgh. Sometimes the rays of the sun are focused upon the sinuses by the use of glass. This sun treatment, or heliotherapy, is recommended chiefly by surgeons interested in the cure of active bone tuberculosis.

The value of sunlight for all children cared for in the institutions we have studied is recognized by some of the officers, as shown particularly in the establishment of country institutions where children have abundant opportunity to play out of doors in the sun, and where the buildings usually admit more sunlight than is possible in the city hospitals. The most concrete statement of the value of sunlight for crippled children which we have heard was that made by Dr. Henry Frauenthal, surgeon-in-chief of the Hospital for Deformities and Joint Diseases in New York, at a meeting of the Federation of Associations for Cripples in New York. He said that the progress made by patients in his hospital who slept in a dormitory the windows of which were never closed but which received little sunlight, was distinctly less rapid than that of other patients sleeping on a porch adjoining this dormitory which admits the sun for many hours every day.

Rest forms a part of the treatment of many of the children in the institutions. This is true not only of those whose surgical treatment requires that some joint be kept immobile, and who are sometimes kept for considerable periods in a fixed position upon a frame or in bed with an extension, but, also, of other patients who regain strength more rapidly when they have long regular hours of sleep, including, in many institutions, a rest hour after dinner.

Provisions for Quarantine

In institutions for crippled children, as in other institutions where considerable numbers of children are gathered together, it is highly important to prevent the occurrence of infectious dis-

eases; and when cases do appear, to prevent the spread of the disease. Seven of the institutions* isolate newly admitted children, usually for two weeks, to prevent the introduction of infectious or contagious diseases. The clothing worn by children when they enter is sometimes destroyed; sometimes it is disinfected lest it carry germs.

The other possible source of infection, besides newly admitted patients, is found in the visits of the patients' relatives and friends. The officers of institutions have learned especially to fear the visits of small children, who are likely to bring germs of measles, whooping cough, or scarlet fever. In a few cases, especially at the Kernan Hospital School, Baltimore, small children are forbidden to visit in the wards. At the same institution adults who visit in the wards are required to wear linen ulsters furnished by the institution, which completely cover their clothing.

Many of the institutions have been very successful in preventing the occurrence of infectious diseases. But the possibility is recognized as always present, and most of the institutions plan to care for such cases apart from the other children, when necessary. All the hospitals except the Hospital for Deformities and Joint Diseases, in New York, have some provision for quarantine. This hospital has limited space because of its heavy dispensary service, which is to be transferred later to a new dispensary building. Cases of serious contagion here or in any other orthopedic hospital located in a large city can be sent at once to a special contagious hospital if the quarantine facilities at the institution where the disease was discovered are not adequate. The city branch of the Minnesota State Hospital, for instance, located on the grounds of the St. Paul City and County Hospital, can send cases requiring quarantine to the building of that hospital for contagious diseases.

Three of the hospitals reserve one or more small wards with adjoining bathrooms for use only in cases of infectious disease. These are the Home for Destitute Crippled Children in Chicago,

* The Home for Crippled Children at Newark, New Jersey, the Massachusetts Hospital School at Canton, the country branch of the Minnesota State Hospital School at Phalen Park, the Crippled Children's Home at Buffalo, the New York State Hospital at West Haverstraw, the Industrial Home for Crippled Children at Pittsburgh, and the Widener Memorial School at Philadelphia.

the Children's Hospital in Portland, Maine, and the New York Orthopædic Hospital. All have separate outside entrances. The isolation rooms at the Chicago institution are in the basement; those in Portland are over the kitchen wing of the hospital, are reached by an outside fire-escape, and can not be entered from any other part of the building; the rooms used at the New York Orthopædic Hospital are on the top floor and can be reached by an outside fire-escape. The five other hospitals have definite space for isolation which, however, is used for other purposes when there are no cases needing quarantine. At four of the hospitals, namely, the Nebraska Orthopedic Hospital, the Home for Crippled Children at Newark, New Jersey, the New Jersey Orthopaedic Hospital at Orange, and the Children's Orthopedic Hospital at Seattle, this is due to pressure for space. The Hospital for the Ruptured and Crippled in New York has ample space for all purposes in its new building, and it is therefore of special interest to note that the isolation ward on the top floor is not to be closed to other uses except when in actual use for quarantine. The large solarium is used by all the patients, and the other rooms which can be completely shut off for isolation will be used for other purposes if necessary.

Careful isolation provision for contagious cases is in some ways more important in convalescent homes than it is in hospitals. The former are often located in the country, at a considerable distance from special contagious hospitals, and contagion is likely to travel more rapidly because more patients are out of bed and they mingle together more freely. Five of the 14 convalescent homes have provisions for isolation in separate buildings. A small wooden building, constructed especially for the purpose, is used at the New York State Hospital. The Widener Memorial School and the Home for Convalescent Crippled Children at West Chicago have fireproof buildings of the most modern construction, for use only for isolation and quarantine. Each of these buildings and the surgical building at the Industrial Home for Crippled Children at Pittsburgh, which is built of wood but has thoroughly modern equipment, can be divided into two sections entirely separated from each other, in case it is necessary to quarantine two different diseases at the same time.

The Massachusetts Hospital School at Canton has various

facilities for quarantine. Single cases have usually been housed in temporary movable houses of which the school has at present three; the number could be indefinitely increased. (For description of these houses see Chapter VI, page 164.) The surgical building, or infirmary, has rooms for isolation of suspected cases so situated that, if the disease develops, the child's bed can be moved directly out onto a porch, whence he is taken to one of the little contagion houses, without passing through any other room in the surgical building. In the rare event of an epidemic which includes many cases, like a "siege" of measles in the summer of 1913, the cottage for older boys can be used as a quarantine.

The Sewickley (Pennsylvania) Fresh Air Home has provisions for isolation in a small ward, with bathroom near. There is no separate outside entrance. At the Children's Hospital School in Baltimore, St. Charles Hospital at Port Jefferson, New York, and the Country Branch of the New York Orthopædic Hospital in White Plains, there are separate wards, with baths, reserved for use only in case of infectious disease. The especially careful arrangement for the bringing of food into the quarantine ward and the return of dishes to the kitchen, at White Plains, is described in Chapter VI, page 172. The country branch of the Minnesota State Hospital at Phalen Park has four rooms on the ground floor, each containing a bowl and toilet and having an outside entrance. Some of these rooms are used for ordinary cases when there is no infection, but it is possible to isolate four kinds of cases separately. At Sea Breeze Hospital, Coney Island, a tent is used for isolation in summer; rooms in the unused buildings of Sea Breeze, the summer home, would be used in winter. At the Kernan Hospital School, Baltimore, a tent is used for isolation in summer; there is no space in the building reserved for isolation in winter. It has already been noted that special precautions are taken at this institution to prevent the introduction of infectious disease. The House of St. Giles the Cripple at Garden City, New York, reserves no space for isolation, but the surgical building would make an excellent quarantine building if the epidemic affected the surgical cases. The Van Leuven Browne Hospital School has no provision for isolation.

Only one of the asylum homes, the Home for Incurables at

Newington, Connecticut, has a separate building used only for isolation and quarantine. Two of the institutions, the New England Peabody Home at Hyde Park, Massachusetts, and the Home of the Merciful Saviour in Philadelphia, have isolation suites with baths, which are used only for their special purposes. Five of the asylum homes have one room each which is reserved for quarantine. At the New York Home for Destitute Crippled Children, the House of the Annunciation in New York, and the Children's House of the Home for Incurables in Philadelphia, there is simply a ward, without special bathroom; at the Daisy Fields Home at Englewood, New Jersey, and the House of St. Michael in Philadelphia, nearby bathrooms ordinarily used by employes could be set aside for use only by the quarantined persons. At the Crippled Children's Home in Buffalo and at the Darrach Home in New York, there is a room which would serve for quarantine if necessary.

Many material provisions for the physical care of children in the institutions have been listed in this chapter as contributing to their physical improvement. There is also an intangible element which has an importance that can not be overestimated. An atmosphere of cheerful good humor is prevalent in the great majority of the institutions visited during the preparation of this study. Many of the people who work constantly with crippled children have commented upon the fact that the great majority of those who are not suffering actual pain seem always happy. Some of the older children who go out into the world with noticeable deformities have learned bitterness, but the smaller children still in the institutions are almost uniformly cheerful. The doctors, nurses, and other employes who help to create this atmosphere, do it in part because they feel a human sympathy with their small charges. But many doctors say that this pleasant atmosphere is necessary for the best physical progress of the children. Dr. Charlton Wallace, who is orthopedic surgeon to the St. Charles Hospital at Port Jefferson, New York, the Crippled Children's East Side Free School, in New York, and the school maintained by Miss Spence's School Society, in New York, states in an article on Surgical Tuberculosis and Its Treatment, printed in the *Journal of Outdoor Life* for March, 1913: "Contentment and happiness of these little ones play no small part in their cure and recovery."

SCHOOL OMNIBUS. (See page 57)
Association for the Aid of Crippled Children, New York City

ADJUSTABLE CHAIR AND DESK. (See page 57)
Special Classes for Crippled Children, New York City Schools

PUBLIC SCHOOL CLASS. (See page 58)
Cleveland, Ohio

Cane Seating

Manual Training. (See page 226)
INDUSTRIAL SCHOOL FOR CRIPPLED AND DEFORMED CHILDREN, Boston, Mass.

Adult Cripples' Workroom. (See page 228)
CRIPPLED CHILDREN'S EAST SIDE FREE SCHOOL, New York City

CHAPTER III

SPECIAL PROVISIONS FOR THE EDUCATION OF CRIPPLED CHILDREN

THE educational needs of most crippled children can not be met in regular school classes attended by healthy children. This fact has been recognized in recent years, and in consequence special classes for cripples have been opened in public and private day schools and in many residential institutions.

Some of the problems which must be solved in the education of crippled children are produced by the fact that both curable and incurable crippled children are usually taught in the same special classes. A large proportion of crippled children can be cured or so far helped that in the course of time they will be able to re-enter regular classes in the public schools. Many of these temporarily crippled children find in the special classes a much needed opportunity to "keep up" with their school work in so far as their physical condition permits. But there are also considerable numbers of crippled children whose cure is impossible, or possible only after years of treatment. These children need a complete system of education which will develop such powers as they possess.

The teacher of crippled children has to deal with some who are familiar with public school routine and have much the same point of view as the normal pupils, together with a large number who have never been able to attend the regular schools or to associate freely with other children. It is not intended to suggest that crippled children can be divided accurately into the two groups mentioned. The crippled child may differ greatly or to only a slight extent from the normal, sound child of his own age in general strength and in point of view; and the graduations are numerous between: for example, a boy who has been a vigorous urchin until he lost a leg in a trolley accident at twelve or fourteen and, on the other hand, a child who has been paralyzed from the age

of three or four, or one who has been fighting to overcome bone tuberculosis since an early age. It is important that every teacher of crippled children should have an elementary knowledge of the different physical difficulties which have caused them to become crippled, and that she should know in the case of each individual child how long he has been in a handicapped condition, and in what degree his life has differed from that of a normal child up to the time when he entered her class.

To meet the educational needs of all sorts of crippled children there are in the United States special school classes organized under two different systems: those connected with residential institutions, and day schools, public or private, attended by children who live in their own homes. There are notable variations in educational work under different systems of organization which will be discussed later in this chapter, but the better schools of both types are similar in most of their detailed provisions for the safety and comfort of the children.

SCHOOL ROOM EQUIPMENT

School rooms are located on the ground floor, wherever possible, and the more modern buildings have large elevators. Fire-escapes are provided with more care than in ordinary school buildings. Stairways have broad treads, at easy distances; thresholds over which a child with crutches or a brace might stumble are usually absent altogether. Where the school can afford such provision strips of rubber or cork are laid on hall floors and stairs, and similar material is sometimes used for covering entire floors of gymnasiums and play rooms. In one or two buildings there are hand rails along the walls at low levels, by which paralyzed children or others who can not walk well help themselves along. Toilets and lavatories are conveniently located. The water-closets are either of varying heights or all so low as to be convenient for the smaller children and those who are most crippled.

In the school rooms adjustable seats and desks are frequently provided. Sometimes the seats are so constructed that one or both sides can be dropped, in case the child using the seat has one or both legs held straight by a brace or plaster; while the backs can be adjusted at any angle and the seat raised and lowered at

will. The desks which go with these elaborate seats are also adjustable as to height, and the top of the desk may be moved backward and forward. This special equipment is somewhat expensive. One set costs usually from $17 to $19. Other schools use desks and seats which can be adjusted as to height, and seats with one central support instead of two side supports, so that there may be more room for a child whose legs are encumbered by apparatus. Many teachers believe that these partially adjustable desks and seats are entirely satisfactory for the greater number of crippled children, and that half a dozen of the more costly drop-seats is a sufficient number in the average school room. At the Massachusetts Hospital School the desks and seats are not fastened to the floor because it has been found that a child is sometimes able to take a more comfortable position through a slight change in the position of the desk or seat.

There are some teachers who are entirely satisfied with ordinary non-adjustable desks and seats like those used in most public school rooms. They say that the children take positions which they find comfortable, and that the ordinary equipment is quite satisfactory when seats and desks of varying heights are provided, so that each child may have the size to which he can best adapt himself. In many of the residential institutions large tables and ordinary chairs are used in place of school seats and desks. This is true not only in a number of small asylum homes with limited funds, and in hospitals where most of the children are bed cases and it is not thought worth while to spend money for school equipment of the ordinary sort, but also in a few institutions like the Nebraska State Hospital and the country branch of the Minnesota State Hospital. These state institutions have well organized schools, but they use tables and chairs not only for the sake of economy but because they are regarded as satisfactory. For children who must sit in wheel chairs, lapboards are provided at the Children's House of the Home for Incurables, Philadelphia. In each case the board is so adjusted that it is about as high above the child's lap as a desk would be.

Aside from these details of architecture and equipment, two special provisions, always necessary in connection with day schools for crippled children, are among the largest items of expense in

such schools; namely, the buses which bring the children to school in the morning and take them home at night, usually accompanied by a nurse or other caretaker, and the food served free or for very small payments at most of the day schools. Hot lunches are usually given to the children at noon so that an additional trip home will not be necessary; and in many classes milk and crackers are served in the morning and afternoon.

CURRICULUM

The curriculum in classes for crippled children is always modeled after that in regular school classes, and it is usually the ambition of a teacher of crippled children to be able to say that the children who leave her classes after they are cured, re-enter regular public school classes in the grades which would have been theirs if they had remained perfectly well. The special classes for cripples are almost always smaller than the regular classes, and each child receives, therefore, closer attention. The teachers believe it is this higher degree of individual attention which counterbalances the time lost by crippled children owing to illness and operations.

The hours of the sessions are usually somewhat shorter than those for children who are not crippled. In the public school classes and in the private day schools the crippled children usually stay from 9 o'clock until half past two or three, with an hour's intermission for lunch. In the three hospitals where school classes are highly organized, in most of the convalescent hospitals or homes, and in one of the residential homes, the school hours approximate those in public school classes for crippled children. In the other residential institutions the hours are shorter. Very commonly classes are held from 9 until 12 only, on five days a week. At two of the hospitals where the teaching is very informal, the hours are still shorter. In one case the teacher gives three hours on each of two afternoons for class work and the same amount of time on two other afternoons for teaching bed patients; at the other hospital a volunteer teacher spends about two hours and a half in the morning, two or three times a week, with the bed patients.

Table VII (pages 134–136) shows the hours of school work

in each institution. It will be seen that they range from the short sessions mentioned for some of the hospitals to full public school hours, and that the amount of time is longer in proportion to the emphasis placed upon educational work as distinguished from surgical treatment.

Furthermore, there is considerably more variety and elasticity of schedule in the special classes for crippled children than in regular public school classes. The children are permitted to leave their work and lie down for short periods, sometimes in a separate rest room provided for the purpose, sometimes on a couch in a corner of the school room. In some schools these rest periods are ordered at scheduled intervals by a surgeon, nurse, or teacher. The class work usually includes rather more frequent change from one subject to another and more hand work than is usual in regular classes. Some of the residential institutions aim to secure more flexibility in the grading of pupils and in their promotion than is believed to be possible under a public school system. The report of the Massachusetts Hospital School for 1912 states on page 16: "Promotions are made freely from group to group at any time during the year when a pupil shows evidence of ability to do the work of the class next above him."

Any visitor to class rooms for crippled children will note that the air is purer than in most public school rooms for normal children. This is especially true in schools which are supervised or visited by physicians, because they generally order open windows. The air in a number of class rooms visited seemed as pure as that out of doors, even during cold weather. This result was always attributed to open windows, never to a system of indirect ventilation. During the winter a plentiful supply of steam is furnished in most of the schools where the windows are kept open, and the children are expected to wear their outdoor wraps on the coldest days.

Three of the institutions have rooms especially designed for the conducting of outdoor classes. At the Massachusetts Hospital School the outdoor classes are held on open platforms adjoining the school building, which forms the only solid wall. On the other three sides there is a tight board railing about 3 feet in height, with pillars at intervals which are connected overhead to the main

building by rods, over which an awning can be drawn. The children sit in collapsible box-like chairs with very high backs which extend to the floor behind their feet, and with winged pieces at each side to break the wind. Very warm clothing, knit caps, and heavy blankets are provided.

The first specially designed building for outdoor school work for crippled children has recently been completed at the Industrial School for Crippled and Deformed Children in Boston. This building, erected at a cost of about $15,000, represents at present the acme of attainment in the erection of special school buildings for tuberculous children. The building has a substantial roof and one brick wall; the other three sides have simply steel pillars covered with concrete, between which there are sliding glass partitions. In order to secure ventilation without a direct draft through the room, the roof is built in monitor form with movable windows in two sections. The seats used are similar in general design to those at the Massachusetts Hospital School. There are also half a dozen canvas cots which stand along the sunny southern side of the building and are used for rest periods.

A simpler outdoor school building has just been completed at the Sewickley Fresh Air Home near Pittsburgh. The building is roofed but has no walls; glass partitions will be put in later.

These are the only institutions where school classes are held out of doors throughout the year, but mention should be made of the excellent arrangement at Sea Breeze Hospital, Coney Island, for outdoor teaching during about half the year. From early spring until quite late in the fall, the school classes there are held in a tent with wooden floor and board walls about 3 feet high. The walls are completed above that height by screens and canvas which may be dropped in case of rain. At the New York State Hospital at West Haverstraw and at Holy Cross House, Cleveland, Ohio, school classes are held in buildings which were formerly barns and are so loosely constructed that the outdoor school ideal has been in some measure attained without special planning. The classes at the New York State Hospital move into a warm room in the administration building during the coldest weather. The report for 1912, page 20, states: "We are not provided with the necessary equipment, such as blanket clothing, for

Main Building

Outdoor Life. (See page 157)
CONVALESCENT HOME FOR DESTITUTE CRIPPLED CHILDREN, West Chicago, Ill.

School Room

Sewing Class. (See page 157)
CONVALESCENT HOME FOR DESTITUTE CRIPPLED CHILDREN, West Chicago, Ill.

carrying on an outdoor school in freezing temperature, but hope to be able to do so next year." The Crippled Children's Home in Buffalo has an unused barn which could be transformed into a school with semi-outdoor class rooms.

Table VII (pages 134–136) presents in detail the points to which reference is made in this chapter, including the number of pupils in the various residential schools; the number of desks of different types; the number of teachers supplied respectively by the city and by the institution itself; the hours of the sessions, and so forth.

Certain general differences in the educational work provided by institutions of the various types may be noted. School work in hospitals is always incidental to the physical care of the children and is often undertaken because a small amount of study amuses the children and is thought by the doctors to facilitate their cure by occupying their attention, rather than because much educational advance is expected. Three of the hospitals provide no instruction; only three have formally organized classes with special school rooms. In the remaining hospitals there is bedside teaching with individual attention to each child. In the state hospitals of Minnesota and Nebraska, where there are organized schools, the teachers also give individual instruction to the children who are in bed and unable to come to the class rooms. Up-patients from the Hospital for Deformities and Joint Diseases in New York are sometimes sent to the nearest public school. A few patients from the Home for Destitute Crippled Children in Chicago have attended the Spalding School for Crippled Children (public), located on land adjoining the site of the hospital.

In convalescent hospitals or homes the situation is very different, because most of the children are out of bed and able to attend school regularly. Most of the patients remain for longer periods of time, and a greater proportion than in hospitals are able to do serious school work. Each of these institutions has a school of its own. One convalescent home—the Industrial Home for Crippled Children in Pittsburgh—which has a school of its own, sends some of the children who are able to walk to a nearby public school, because the superintendent desires to broaden their outlook as much as possible.

The school arrangements in the asylum homes are determined by several factors. Five of the smaller homes do no educational work themselves but send the children to public school classes; sometimes to special classes for crippled children, sometimes to regular classes. This is usually done for reasons of economy, especially in small homes where there are not many children of school age. The superintendents and managers of some of the homes prefer to send the children to public school classes, as they believe it desirable for them to have some contact with the world outside the institution.

In the majority of cases schools maintained in institutions are supported by the institutions themselves, but in two of the hospitals, three of the convalescent hospitals, and one of the asylum homes, the teachers are furnished by the board of education of the city in which the institution is located.

PUBLIC SCHOOL CLASSES FOR CRIPPLES

Public school classes for crippled children have been organized in New York, Chicago, Cleveland, and Detroit, and the opening of similar classes in Philadelphia* is under discussion.

The following is a statement in outline of the work of the classes in the four cities mentioned:

TABLE B.—PUBLIC SCHOOL PROVISION FOR CRIPPLED CHILDREN IN FOUR CITIES, IN THE SCHOOL YEAR 1912–1913

(Not included in general statistical tables.)

City	Classes	Children enrolled	Average daily attendance	Teachers	Annual bonus paid teachers
Chicago, Ill. . .	7	199	135	7	$200
Cleveland, O. . .	4	88	77	5	..
Detroit, Mich.. .	1	44	40	3	200
New York, N. Y. .	39	657[a]	569	39	100
Total . .	51	988	821	54	

[a] "On register."

In New York City there are 39 classes, distributed throughout the city, with usually not more than two or three in a single

* In September, 1913, a class was opened in Philadelphia, with accommodations for about 25 children. Baltimore established classes in 1913.

school building. Twenty is the maximum number allowed in a single class for crippled children and the average "on register" in the classes closely approaches this limit. Twelve is the minimum number with which a class may be organized. The teachers receive a bonus of $100 per year over the amount which they would receive if they were doing similar work with children not crippled. This bonus is the same as that paid to teachers of the blind and deaf. Sessions are one hour shorter than those of the majority of the school classes; that is, from 9 until 2, instead of 9 until 3. Hot lunches are sold to the children in the public schools. In Public School 107, for example, soup is served for three cents, and sandwiches, cookies, cups of cocoa, and so forth, for one cent each. Children are required to take the soup before they are allowed to have sweets. In some places the children in the special classes for cripples are served first.

About one-third of the buses used for transporting the children and the caretakers who accompany them are furnished by the board of education. The remainder are paid for from private sources, through the Association for the Aid of Crippled Children which furnishes nurses to accompany the buses to the schools.

The city of Chicago maintains special classes for crippled children in two sections of the city. On the west side the Spalding School, an excellent new building, thoroughly modern, is given over entirely to classes for crippled children. There are five class rooms in addition to a play room, surgical dressing room, rest room, gymnasium, and so forth, all on the first floor. Five teachers are employed, and about 100 children are registered in the school in the winter. Thirty-four children attended a morning session during the summer of 1911. The hours are from 9 to 11, and 12:30 to 2. Most of the desks and seats are of the special adjustable type. A nurse comes to the school every day to look after the physical needs of the children.

The large Fallon School on the south side of Chicago has reserved on the first floor two class rooms and a play room, kitchen, dining room, toilet rooms, and so forth, for the exclusive use of crippled children. Desks and seats are adjustable only as to height. Two teachers are employed and the average number of children is 45. The session lasts from 9 until 2:45 during the winter.

In 1911, 32 children attended summer classes from the time when the public schools closed until July 27th. The summer session lasts only from 9 until 12.

The work for crippled children connected with public schools in Chicago is financed entirely by the board of education. A bonus of $200 per year is paid the teachers. Hot lunches and transportation by buses are furnished to the children. At present seven buses are used to carry children to and from the Spalding School, and three buses to carry those who attend classes at the Fallon School. A police officer is detailed to accompany each bus on its rounds, night and morning.

In Cleveland, classes for crippled children in connection with the public schools are conducted in a one-story wooden building in a large yard at the rear of the Wilson School, one of the largest public schools in the city. There are class rooms, a dining room, kitchen, and surgical dressing room. Desks and seats are adjustable as to height; one central pivot supports both a desk and a seat. A principal, grade teachers, and one kindergarten teacher are employed. They receive no extra pay. A visiting nurse is furnished jointly by Rainbow Cottage, a country convalescent children's hospital, and Lakeside Hospital. Buses for the transportation of children, and hot lunches, are provided by the Sunbeam Circle, an organization of women. The average attendance is 77.

In Detroit, class rooms are reserved for crippled children on a lower floor of the Clinton School building. The total number of children enrolled is 44, the average daily attendance is 40. Only 15 crippled children are allowed in one of the special classes, while in ordinary school classes in Detroit the number of children is usually determined by the seating capacity of the room and in most cases runs from 45 to 48. The three teachers of crippled children are paid $200 a year more than teachers doing similar work with children who are not crippled. The hours of the session are the same as those in other school classes during the spring and fall; but from November until April the classes for cripples begin an hour later in the morning, so that the children need not leave their homes so early during the cold weather. A nurse is provided by the city. She helps the children to and from the carriages and

School for Children in Bed
Children's Orthopedic Hospital, Seattle, Washington
(See page 156)

BASEBALL TEAM. (See page 161)
Massachusetts Hospital School, Canton, Massachusetts

PLAY BALL! (See page 199)
Home of the Merciful Saviour for Crippled Children, Philadelphia

assists in the serving of luncheon at noon and milk at other hours during the day.

PRIVATE DAY SCHOOLS

In New York City there are four private day schools for crippled children. The Crippled Children's East Side Free School in New York is a private organization owning its property and financing all phases of its work except the actual grade teaching, for which teachers and equipment are furnished by the city board of education. The class rooms can accommodate about 200 children, and the number registered is never below the full capacity. There are 163 desks and chairs of the special adjustable variety and 33 ordinary kindergarten chairs. All grades from the kindergarten through the eighth grade are included. Classes are held on regular public school days from 9 until 2:30, with an hour's intermission for luncheon. The teaching resembles that in other public schools. It is worthy of note that the windows are kept open and the air is good at all seasons of the year. A visiting orthopedic surgeon holds weekly clinics at the school. An assistant surgeon and a trained nurse assist in the adjustment of braces, application of plaster dressings, and other treatments. For important operations the children are sent to various hospitals. Under the supervision of a staff of nurse maids, all the children have baths twice each week. There were 9,703 baths recorded in the last school year, and 450 visits were paid to the homes of the children. A summer home at Oakhurst, New Jersey, houses 106 children at a time during July and August. Each child's stay varies from two to eight weeks. The important part of the school's work represented by industrial classes will be discussed in Chapter IV.

An open-air class for children with bone tuberculosis is maintained by the alumnæ of Miss Spence's School on one deck of a boat belonging to Bellevue Hospital, which is moored near the foot of East Twenty-sixth Street. The average attendance is 20. The teacher and school supplies are furnished by the board of education. Miss Spence's School Society supplies the omnibus, special chairs for outdoor use, warm wraps, and meals, including milk and eggs served when the children reach the boat in the morning and

at 4 o'clock in the afternoon, and a hot dinner at noon. A visiting orthopedic surgeon holds weekly clinics on the boat and a trained nurse is in constant attendance.

There are two private schools for crippled children in New York which have no relation to the board of education. The William H. Davis Free Industrial School for Crippled Children offers kindergarten work and instruction through the eighth grade in addition to industrial work. The school pays for two teachers and furnishes all supplies. The children are at the school from 9 until 4. A wagonette owned by the school makes the rounds for the children who can not walk. The driver carries the children to and from the wagon when necessary and a nurse rides with them. A hot dinner is served free to all the children at noon. The desks and seats are not adjustable. This school has a summer home at Claverack, New York. The industrial work will be covered in Chapter IV.

The Rhinelander Industrial School for Crippled Children is an interesting combination of private activities. The industrial classes will be discussed in Chapter IV. The Children's Aid Society of New York is responsible for the maintenance of the building and for the payment of the teachers who give instruction in the grade classes. The building is somewhat old-fashioned and has no elevator. For this reason the classes are arranged on a unique basis. The children able to climb stairs easily are assigned to the second floor, the others remain on the first floor. The two grade class rooms are much like country schools; each includes work in all the eight grades and there is no attempt to grade the children as exactly as in most public schools. Academic classes are held every forenoon except Saturday, from 9 until 12. The children are taken to the school and returned to their homes by buses furnished through a private gift.

In Boston, the Industrial School for Crippled and Deformed Children has done pioneer work in the cause of education for crippled children both in grade branches and in industrial classes, and has maintained its leadership in both. The main building is modern in every particular, with all the special equipment needed for the safety and comfort of crippled children. Its class rooms contain 100 desks and seats of the special adjustable

sort. Each desk is adjusted at the beginning of the year, under the supervision of the doctor in charge, for the particular child who is to use it. The capacity of the school has recently been increased by the erection of a building for an outdoor class room, which is a model structure for its purpose.

The equipment, which is equal to that in the best public schools, includes slate blackboards, maps, kindergarten materials, and so forth. The curriculum closely resembles that of graded public schools, and many observers of the school believe that its teaching standard is above that in most public schools. A nurse is in constant attendance and visits the homes of the children on Saturdays and during the summer months. Visiting physicians watch over the physical condition of the children, and the nurse carries out their directions, seeing also that the children go frequently to the various dispensaries at which they are being treated. This school has a long waiting list, and considerable time occasionally elapses before a vacancy permits the admission of new applicants.

CHAPTER IV

HAND WORK AND VOCATIONAL TRAINING

THE most recent feature in the development of special educational provisions for crippled children is occupational training. Simple housework and sewing have been part of the life of most residential homes for cripples since their establishment, and some of the special industrial schools are older than most of the hospitals. Yet, for reasons that can readily be understood, this phase of educational training has been in most communities the last to receive special attention.

It is generally true that in each city the orthopedic hospitals, or orthopedic wards in general hospitals, have brought their work to a high standard of surgical and medical efficiency as the necessary first step in providing for cripples and children likely to become cripples if not given surgical attention. The next step has been the establishment of schools for convalescents in residential institutions and of special day schools for cripples who live at home. It has usually been only after the pressing needs for surgical attention, convalescent care, and education in the simple academic branches have been met in some degree in a community that the question of vocational training for crippled children and young people has received serious consideration.

The same arguments which are advanced for the occupational or vocational training of healthy children apply also to crippled children. There is difference of opinion as to the age at which any child's preparation for wage-earning should begin, but most educators agree that this special training promises to every child a better chance of a good "start in life" and more rapid advancement than would be possible if he had no preliminary training. When the child is a cripple, certain other considerations enter:

First, the simpler forms of industrial work, as well as grade

Wood-working Room

Girls' Sewing Room. (See page 161)
MASSACHUSETTS HOSPITAL SCHOOL, Canton, Massachusetts

Cooking Class

School Room

Industrial Room. (See page 189)

NEW ENGLAND PEABODY HOME FOR CRIPPLED CHILDREN, Hyde Park, Mass.

class work, have been used chiefly for the sake of arousing an interest in definite work of any sort which makes the child an easier object of care and perhaps indirectly facilitates physical cure.

A discussion of the treatment of crippled children which appears in the English *Charity Organisation Review* for September, 1909, includes a strong statement by Warrington Haward ending with the following sentences:

"If these young people can feel they are doing some useful work—and especially if they are exercising some developed talent or skill—they are at once raised to a much happier plane of life, and their work acts as a tonic both to mind and body. One useful result is that their attention is diverted from their ailments and incapacity, and this helps to neutralize the painful self-consciousness which often aggravates their sufferings."

Just as the young crippled child, the special burden in his home, goes to school much as other children do, and there gains a new outlook upon life, so the cripple of wage-earning age takes great strides toward a normal point of view when he finds himself actually doing useful work. Our humanitarian interest is sufficient reason for encouraging cripples who can not become entirely self-supporting, or even earn anything worth mentioning, to have their small share in the work of the world because such work may partially bridge the gap between them and the outer world, and so increase their happiness.

Second, some people urge the occupational training of crippled children because they desire to lift from the charitable public part of the present burden of supporting cripples. It is believed that many crippled children who would otherwise be entirely dependent can be taught occupations by which they can earn part of their own support.

This introduces an element very different from anything met in the course of industrial training for well children. The success of such training for normal children is judged according to the ability of the trained pupils to take better positions and advance more rapidly than the untrained. The benefit of industrial training can be judged only by comparing those who are trained with untrained children who are also crippled. When crippled

children who would otherwise fail as producers are able to earn part or all of their own living after special training, the value of that training must in many cases be judged by the difference between the measure of success they do attain and entire dependence.

SUITABILITY OF OCCUPATIONS CHOSEN

It is more necessary to recognize the indefiniteness of the word "cripple" in discussing industrial training than in discussing any other phase of the care of crippled children, except, of course, technical matters of surgery. Trades which are suitable for children with some kinds of physical handicaps are quite impracticable for those who are crippled in other ways. The physical condition and possibilities as well as the mental aptitude of each individual child must be studied before deciding for what occupation he shall be trained. In choosing the occupation, the first question is: Can this particular child do this work?

It may be said in general that there are many occupations open to cripples whose hands are in good condition, and also that the loss or disablement of one arm is by no means a barrier to choice among a considerable number of employments. The child who has lost both hands or arms or has been deprived of their use presents the hardest problem. No school has been found in the course of this study where any effort has been made to plan employment for an armless child. Miss Kittie Smith, of the Home for Disabled Children in Chicago, who lost both arms at the age of nine years, is a remarkable example of what perseverance and intelligence can accomplish in training the feet to do an extraordinary number of things for which most people would suppose hands to be essential. Miss Smith runs a typewriter, does very good sewing and embroidery, draws with more than average skill, and makes pieces of furniture which require the use of a saw, hammer, and other tools. Such accomplishments must be regarded as possible, however, only in those cases in which the loss of arms and the consequent beginning of unusual efforts with the feet occur when the child is very young.

Fortunately, the number of crippled children who are deprived of both arms as the result of either accident or disease is comparatively small. The cases seen during the progress of the

Miss Kittie Smith Embroidering

Miss Kittie Smith With a Pupil

Home for Disabled Children, Maywood, Illinois. (See pages 64 and 188)

Miss Kittie Smith Carpentering

Miss Kittie Smith Typewriting

Home for Disabled Children, Maywood, Illinois. (See pages 64 and 188)

study have usually been children so far paralyzed that no industrial training was possible. However, one boy who had lost both arms in a trolley accident was brought to our attention and efforts were made to find an opening for him as a test of the possibilities for such cases, but no place could be found. For instance, telegraph operating was seriously considered. It is not taught in any of the New York institutions for cripples, but the educational director of the school of telegraphy at the East Side Young Men's Christian Association came to the conclusion that the boy could operate the key by wearing some simple apparatus attached to one of his stumps. But on expert advice, it was decided that such training would be useless because the boy would almost certainly be unable to hold a position in competition with others not so afflicted. He could do only the mechanical things which his appliance made possible and for which he had been especially trained. An employer prefers people who can, if necessary, be called upon in an emergency to do work apart from their usual duties. Furthermore, an armless person who wears any conspicuous piece of apparatus could not work without annoyance in places where this feature of his appearance would be noticeable.

Special artificial arms have been tried by many people with varying degrees of success. They are so costly, however, that it would usually be impossible to secure them for the poor children who attend the schools with which this study deals. It is not our purpose to pass judgment upon the practicability of artificial arms because we have made no study of the subject. As stated before, it concerns very few, indeed, of the children in the institutions covered.

The need of exhaustive preliminary study before opening trade classes is open to question. It is interesting to note that the most recently organized trade school for cripples, the Trade School of the Hospital of Hope for the Injured and Crippled, established by Dr. Jaeger in New York in 1912, has opened five classes for the teaching of skilled handicrafts with the assumption that there are a sufficient number of crippled men able to learn the different kinds of work. The assumption has been justified by the gradually increasing number in each class. This experimental method of organizing classes in subjects which are clearly suited to some

kinds of cripples, and teaching those who come, without waiting to determine with scientific accuracy whether or not the particular trades offered are the best ones, has the merit of time saving in the beginning of this much needed work. However, this school and several of the other trade classes are running with an attendance considerably below their capacity. The Rhinelander School class in jewelry making, for example, has only two-thirds as many boys as the managers desire, in spite of the skilled teaching offered without cost and the success of boys who have been graduated in securing positions.

Various methods have been adopted in efforts to increase the number of pupils in these two schools. Efforts to induce individual surgeons or officers in orthopedic institutions and dispensaries to furnish names of possible candidates have been unsuccessful. This lack of success may be due partly to the necessary requirement that pupils in Dr. Jaeger's school must work faithfully, without wages, for several months, while the jewelry class of the Rhinelander School requires an apprenticeship of two years.

Institutions about to open new classes for vocational training of crippled children should know, if possible, what proportion of the crippled children likely to enter the classes represent each of the different types of handicapped conditions. Hospital records show the medical and surgical diagnosis of each case treated, but, as stated in Chapter I, it would be necessary to combine the records of many hospitals to obtain this information. Only where very complete records are kept of both hospital and dispensary cases and after an exhaustive study of these records could the representatives of the trade schools learn how to classify the cases according to ability or inability to stand or walk for definite periods, to take particular positions, or to exert muscular effort in the definite directions required by some kinds of mechanical work. If such a classification of hospital cases could be made, with special reference to the dispensary cases fourteen or sixteen years of age or older, the founders of trade classes could tell with considerable exactness what trades they should teach.

Most of the children in the institutions visited have the use of one or both arms, and it should be noted that by far the greater

number of occupations mentioned in this chapter are those in which most of the work can be done while the worker is seated.

CENSUS OF CRIPPLES IN BIRMINGHAM, ENGLAND

No comprehensive census of crippled children has been taken in any state or community in the United States. The one attempt to secure a complete and scientifically analyzed census of the cripples of a community, not only from hospital records but from many other sources, including school records and those of many charitable organizations, is the census of cripples in Birmingham, England,* already mentioned in Chapter I. In this city of 500,000 people were found 1,001 cripples over sixteen years of age and 1,006 under sixteen years of age. The report of this census printed in October, 1911, is worthy of study by any city in America where even a rough estimate of the number of cripples is to be made. The cripples over sixteen and under sixteen, respectively, were divided by the special committee of inquiry, which included a number of surgeons: first, according to the medical or other causes of their physical difficulties, then according to their ability to work. As already stated in Chapter I, a cripple was defined as: "A person whose (muscular) movements are so far restricted by accident or disease as to affect his capacity for self-support." The working ability of the 1,001 cripples sixteen years of age or more is shown by the following table:

TABLE C.—WORKING ABILITY OF 1,001 CRIPPLES 16 YEARS OF AGE OR MORE. BIRMINGHAM, ENGLAND, 1911

(Not included in general statistical tables.)

Status	Cripples	
	Number	Per cent
Able to go to work under ordinary conditions	214	21.4
Able to attend a central workshop	145	14.5
Able to do remunerative work at home	111	11.1
Unable to do any remunerative work	531	53.0
Total	1,001	100.0

* Report of a Special Sub-committee of Inquiry Concerning Physically Defective Adults and Children to the City of Birmingham Education Committee, 1911.

The following table shows the measure of self-support attained by cripples sixteen years of age or more:

TABLE D.—SELF-SUPPORT AMONG 1,001 CRIPPLES 16 YEARS OF AGE OR MORE. BIRMINGHAM, ENGLAND, 1911

(Not included in general statistical tables.)

Status	Cripples	
	Number	Per cent
Self-supporting	176	17.6
Not self-supporting but did not require help	156	15.6
Not self-supporting and did not require help at time of census, but might be expected to need it later	144	14.4
Not self-supporting and required help	191	19.1
Being maintained in charitable institutions	334	33.3
Total	1,001	100.0

The following table indicates the working capacity of 697 cripples under sixteen years of age who were not at work:

TABLE E.—WORKING ABILITY OF 697 CRIPPLES UNDER 16 YEARS OF AGE WHO WERE NOT AT WORK. BIRMINGHAM, ENGLAND, 1911

(Not included in general statistical tables.)

Status	Cripples	
	Number	Per cent
Likely to be able to go to work under ordinary conditions	230	33.0
Likely to be able to attend a central workshop	191	27.4
Likely to be able to do remunerative work at home	42	6.0
Likely to be unable to do any remunerative work	57	8.2
Future capacity could not be estimated	177	25.4
Total	697	100.0

The printed report of this census does not take up in detail degrees of handicap suffered by the different individuals, how many are unable to stand, unable to walk, and so forth, but it is

probable that the original records would give much information of this kind. The committee stated as its conclusion that "all the cripples in the city" [at that time] "not including the 334 cases in the workhouses and infirmaries, would be properly provided for" [though with a very low estimate of the amount necessary for subsistence] "if

"(1) A Central Workshop were provided for 145;

"(2) Work were provided at home for 111 (reasonable remuneration being given in both cases for work done);

"(3) Financial assistance were given to 191 (the amount required varying from about 2 shillings to 5 or 6 shillings per week)."

A second report of this committee, dated March 29, 1912, recommends that the first need be met by the establishment of a workshop for crippled girls where they may learn general needlework, embroidery, millinery, and tailoring, and receive wages for their work; also a central workshop for cripples of both sexes doing printing and bookbinding.

WILL THE OCCUPATION BE PROFITABLE?

The suitability of any occupation for a particular crippled child is not the only point which must be carefully decided. There is a second question which has been until recently too little considered; namely, Is this the most profitable occupation which this crippled child can enter? Certain manual occupations have become traditional in institutions. Basketry, chair-caning, and the making of fancy articles for sale at bazaars have been undertaken as obviously suitable for children unable to do more active work. The fact that it is hard to secure steady employment or reasonably good wages by making such articles outside the institution and away from the possibility of a "charity" demand for the things made, has been too often forgotten. But the present study has revealed the general development of discontent with these traditional occupations as the sole kind of industrial training offered. We have been surprised and greatly interested to find how frequently superintendents and teachers express their desire to branch out into more "practical" lines of industrial teaching, or their satisfaction over having been able to do so.

The relative merits of different trades from this point of view is in part a local problem, and the choice of trades to be taught in industrial schools should be made with a knowledge of the demand for workers in those trades in the community, the wages paid, and the opportunities for advancement as compared with those in other occupations. However, one broad generalization may be accepted as true for all parts of the country. As far as possible, skilled occupations should be taught to cripples. Many cripples can not expect to compete in quantity of output with the work of perfectly sound people, and they should be led to enter occupations where the competition is in the direction of quality. This does not mean that skilled handicrafts should be taught when no market can be found for the goods produced. But serious efforts should be made to find such a market or to teach cripples clerical or other occupations requiring skill, before it is decided to teach them only the easily learned occupations in which competition is heavy and wages low. Some detailed suggestions as to particular occupations which might be more largely introduced into trade schools for cripples will be made at the end of this chapter, after a discussion of the occupations now taught in the various institutions.

OCCUPATIONS TAUGHT IN 37 INSTITUTIONS

Table VII, on pages 134–136, which gives details concerning the academic school work, includes also the number of teachers giving hand work, the number of pupils in hand work and domestic science classes, and the number receiving vocational training. In the latter column have been placed only the numbers of children who are giving a considerable portion of their time to direct training for some occupation in which it is expected that they will be wholly or partially self-supporting. The large numbers in the column headed "hand work and domestic sciences" do not include children who do housework, except the older girls at the House of St. Michael and All Angels in Philadelphia. The children who do garden work are not counted because this work has not yet progressed far beyond nature study. Several of the institutions located in the country expect ultimately to train some of their children to be market gardeners.

Table VIII, pages 137–139, shows the kinds of hand work and vocational training now taught in all the institutions for crippled children. All kinds of hand work except kindergarten processes have been included. The kindergarten work is also included for four institutions where it has been carried to a point beyond what is usual in kindergartens. The tabulations do not show the fact that in several instances the institutions have facilities for teaching some occupations for which they have at present no pupils of the right age or otherwise fitted. For example, at several of the residential institutions, including the New York State Hospital at West Haverstraw, typewriting and stenography have occasionally been taught by the secretary or bookkeeper of the institution, usually to one or two pupils at a time.

The managers of the Country Branch of the New York Orthopædic Hospital find that most of the children are now cured and sent home before they are old enough to receive industrial training and have, therefore, curtailed their vocational work.

It will be seen from the tables that only two of the ten hospitals have any hand work or vocational training. Both the Hospital for the Ruptured and Crippled in New York and the State Orthopedic Hospital in Lincoln, Nebraska, provide liberally for simple hand work, and the latter is unique among institutions classed as hospitals because of its introduction of several kinds of occupational training. Most of the asylum homes teach simple housework and sewing, but occupational training apart from sewing has been very little developed. The bulk of the occupational training of crippled children in America is done by convalescent hospitals or homes and by private day schools. Some of this occupational work is taught in formal classes by special teachers, but much of the training received by children in residential institutions grows out of the daily life of the institution.

INFORMAL VOCATIONAL TRAINING IN INSTITUTIONS

The children very often help with the domestic work. In 13 of the 37 institutions* they receive sufficient training in housework to be of distinct service when they go back to their own

* State Orthopedic Hospital, Lincoln, Nebraska; State Hospital for Crippled Children, Phalen Park, Minnesota; Country Branch of New York Orthopædic

homes. In six of these institutions—named first in the footnote—the work is planned in advance, and each child is assigned to definite tasks usually listed and posted in the dining room. The tasks are changed at several of the institutions at regular weekly or monthly intervals, and in others irregularly. The work done by the children usually includes dish wiping, the arranging of tables, dusting, light sweeping, the making of beds, and care of their own possessions. Very often the older girls assist in dressing and caring for younger children.

But the effort to use the routine domestic work of an institution for purposes of vocational training is usually disappointing, especially where the children are assembled in large groups, where the cooking is done in large quantities by steam, where the dishes are washed by machinery, and the dining room is cared for on system. It is very difficult to reproduce the home conditions under which ordinary housekeeping is done. The only way in which institution work can be made efficient for vocational training is by grouping children in small cottages, each cottage being a complete domestic unit in which the cooking, baking, table service, and sleeping are managed on the same plan as in an ordinary household. Such cottages should contain not more than 15 children.

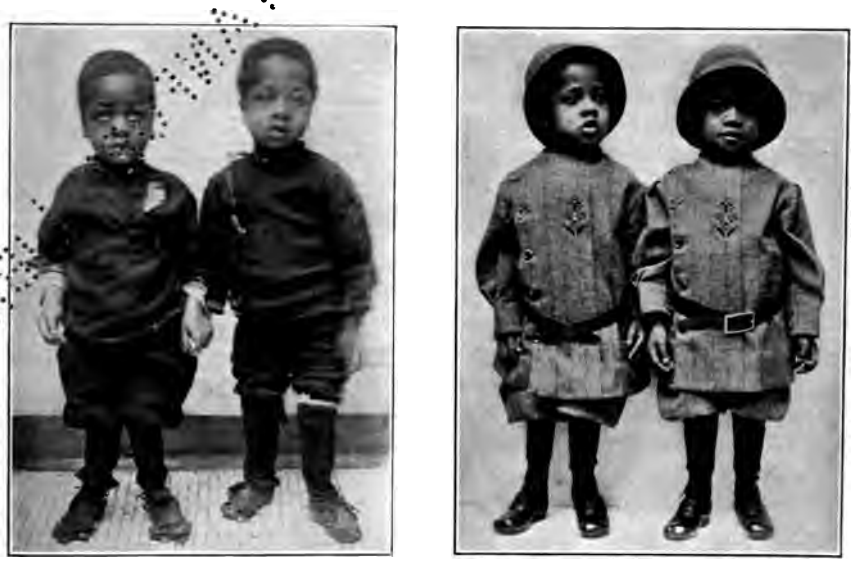
At the Massachusetts Hospital School the older girls spend the last year or two of their residence at the school in a special cottage where they are under the direction of a house mother, but without the assistance of servants. The girls attend to all the housekeeping. The cottage has purposely been made very simple and the girls learn to do work by methods which they can follow later in their own homes. They use a wood or coal range for cooking, wash in set tubs, dry their clothes on lines put up on the rear porch, and iron with an ironing board between two chairs, quite as they might in a small household with few conveniences.

Hospital, White Plains, New York; Daisy Fields Home, Englewood, New Jersey; Holy Cross House, Cleveland, Ohio; Home of the Merciful Saviour, Philadelphia, Pennsylvania; Convalescent Home for Crippled Children, West Chicago, Illinois; Home for Disabled Children, Maywood, Illinois; House of St. Giles the Cripple, Garden City, New York; Home for Destitute Crippled Children, New York City; Darrach Home, New York City; New England Peabody Home, Hyde Park, Massachusetts; Home for Incurables, Newington, Connecticut.

The Cooking Class

Main Building and Yard. (See page 190)

DAISY FIELDS HOME AND HOSPITAL FOR CRIPPLED CHILDREN, Englewood, N. J.



As Admitted (See page 216) As Discharged

RECONSTRUCTING THE CARTER TWINS

Rainbow Cottage and Lakeside Hospital, Cleveland, Ohio

THE NURSERY. (See page 200)

House of St. Michael and All Angels, Philadelphia

The institution has a steam laundry and the most modern housekeeping equipment for its other buildings; but experience with ultra-modern machinery would be of little use to girls who go afterward into cheap or moderate priced apartments or houses in the country districts. At the House of St. Michael and All Angels in Philadelphia the young colored girls receive similarly comprehensive training in housework and some of them have left to take positions in domestic service.

In all the residential institutions, a great deal of sewing is necessary in order to keep the children's clothes and the household linen in good order. In the larger institutions, one or more seamstresses are employed. In some of the smaller ones a seamstress comes in occasionally by the day. The older girls in the institutions usually help with the mending and sometimes with the making of simple garments for themselves and other children.

It will be seen that sewing is taught in a greater number of institutions than any other hand work; that is, in 22 out of the 37 residential institutions. The amount of time given to the work and the degree of skill which the children develop vary greatly. With sewing, as with other domestic work in which the children have a part, the emphasis in some institutions is put upon the desire to have the children help out with the necessary work in order to reduce expenses by decreasing the number of servants. In other institutions more attention is paid to seeing that the children learn as much as possible. Institutions which have classes in sewing meeting at regular hours will be mentioned later. Of the homes where sewing is done informally, the House of St. Giles the Cripple and the Home of the Merciful Saviour have daily meetings of the older girls who do sewing of considerable variety under the direction of a seamstress.

In a smaller number of institutions, other kinds of work have grown naturally from the opportunities offered by the varied life of the institution. Several of the children at the Nebraska Hospital School have been taught enough of cataloguing and general library work to arrange and manage the institution's library. The children at the State Hospital in West Haverstraw, New York, had at one time some share in the cataloguing of their

library. Stenography and typewriting are taught at the Kernan Hospital in Baltimore and the St. Charles Hospital in Port Jefferson, New York. As stated before, there are several other institutions where the secretary or bookkeeper has sometimes given similar instruction to pupils who were interested.

Institutions located in the country offer excellent opportunity for the training of children in gardening and various kinds of farming. At present the Home for Incurables in Connecticut, the Sewickley Fresh Air Home in Pennsylvania, the Daisy Fields Home at Englewood, New Jersey, the Country Branch of the New York Orthopædic Hospital at White Plains, and the State Orthopedic Hospital of Nebraska have gardening classes. At the home in Connecticut, gardening is taught by a special teacher engaged for the summer. At the other places, the gardener or farmer for the institution teaches the children. Only the Massachusetts Hospital School has thus far given actual instruction in farming other than gardening; but several of the country and suburban institutions, notably the Kernan Hospital School and Children's Hospital School in Baltimore, the Convalescent Home in West Chicago, and the Minnesota State Hospital at Phalen Park, expect to develop later various kinds of farm work, including dairying, the raising of chickens, squabs, and ducks, the care of horses, and the use of implements in general farming, in addition to the raising of vegetables and flowers for the market.

All of these outdoor occupations are especially advantageous for children who have had bone tuberculosis and need to continue life in the open air for a long time. It is not possible, of course, for those who are badly crippled to assume much responsibility in farm work; however, boys who limp in walking but have strong arms are able to do a great many kinds of farm work on specialized farms such as are usually found near eastern cities. There would be fewer openings for crippled boys on extensive western farms where grain is raised on a large scale and most of the work is done by heavy machinery which requires the efficient use of both hands and both feet.

Chair-caning, the making of simple furniture, and cobbling are usually taught in formal classes and will be mentioned again later in this chapter, but it should be noted in passing that these

Courtesy of American Journal of Care for Cripples

CLASS IN MAKING OF RATTAN FURNITURE, TRADE SCHOOL OF THE HOSPITAL OF HOPE FOR CRIPPLED MEN. (See p. 231)

kinds of hand work may develop also in a residential institution because the children who learn to do such work can repair furniture in the institution and keep their own shoes in good condition. Brace making has been much discussed as a possible source of livelihood for crippled boys, but it is not now taught in any of the institutions. It may be offered at the Widener Memorial School and the Nebraska State Hospital later when there are older boys in sufficient numbers to furnish pupils for this as for the other trades already taught.

OCCUPATIONAL TRAINING AT TWO NOTABLE INSTITUTIONS

Two of the largest and best equipped institutions are especially notable for the comprehensive fashion in which they have turned all the resources of the institution into possible avenues of vocational training for the children in their care. The Widener Memorial School in Philadelphia has a capacity of 100 children; the Massachusetts Hospital School located in the country near Canton has a capacity of 250 children. In each institution so large a staff of employes is necessary in caring for the buildings and grounds and otherwise continuing the general work of the institution that opportunity is afforded to the older boys and girls to turn naturally to the kinds of work which most appeal to them. At the Widener Memorial School one of the older girls is securing excellent training as a teacher under the direction of the principal of the institution school. The girl has charge of certain classes and is receiving training not unlike what she would receive in practice courses at a normal school. Another girl is learning the care of hospital wards and something about elementary nursing. Cooking is taught by the institution chef. Stationary engineering and practical carpentry are taught respectively by the school's engineer and carpenter.

Most of the industrial work at the Massachusetts Hospital School is not learned through formal courses, but in much the same natural fashion that boys on a farm and girls who work in their mother's kitchen "pick up" information. The children are given the run of the place and are allowed within reason to follow the various employes necessary for so large an institution. It is the desire of the superintendent that the natural inclination of the

children shall be observed and that when a child shows special interest in some one kind of work, he shall, if possible, be given a chance to learn to do that work.

It is found that some boys "hang round" the barn and are chiefly interested in the horses, goats, oxen, pigs, and chickens. At present four boys are regularly helping the farmer. Others are more attracted by the engine house. The painter and carpenter receive their share also of interested attention. Three boys are now working at carpentry. Ten boys are learning cobbling. They do all the repairing of shoes for the inmates of the institution; they also make pretty good shoes on simple lines, especially moccasins. Three boys are now working at printing. They print laundry lists, library catalogues, and other forms used in the institution.

The most interesting case of a boy's development along the line of his natural interests is that of a young fellow, now eighteen years old, who has twisted legs and must use crutches when he walks at all rapidly. His general health is good and his arms are strong. Three years ago, when he came to the Hospital School, he was an unmanageable boy, considered a "hard case." The superintendent, Dr. John E. Fish, "tamed" him in the shortest way possible, through discovering work which would interest and occupy him. The boy's fondness for "hanging round" the door of the power house was observed. He was allowed to go inside, to throw on a shovelful of coal occasionally, later to read the meters, and then gradually to make himself more and more useful to the engineer. He was made to feel that this was a privilege and none of the other boys was allowed the same freedom in the power house. Finally, the engineer took him to the State House in Boston and he successfully passed the state examination for a third class fireman's license. Later, he secured a second class license. Then Dr. Fish began to seek a job for the boy, who is fully able to earn his living.

Much difficulty was found in the prejudice of employers against having a crippled person work with machinery, and of fellow-workmen who thought such a boy might not do his full share of the work. But at last an owner of a small tannery engaged the boy to take charge of the heating apparatus by night;

he works alone and it is hard to see how his twisted legs can trouble the esthetic sense of anybody.

Dr. Fish says that at least 50 boys are laying foundations for useful lives in the future in this way.

A boy with traumatic flat feet, sixteen years old, who is unable to advance beyond the eighth grade in school, has become very skilful in the farm and grounds division under the direction of the head farmer. He will be discharged in a short time to do similar work about a country place.

Another boy, of about the same mentality, has recovered from a tuberculous knee. He is now a strong, well developed young man who is looking forward to a responsible position on a nearby country place. He has the reputation of having the best groomed horse and the brightest harness and wagon seen anywhere round. The head farmer is also teaching him to operate an automobile.

There is less variety in the openings for girls. In the cottage for older girls at the Massachusetts Hospital School all branches of housekeeping are taught. Some of the girls may later work in the steam laundry which does the major part of the laundry work for the institution. Other opportunities for the girls seem limited thus far to sewing. The sewing classes are formally organized; one head seamstress and her assistant spend all their time in the sewing room. But it should be remembered that the work is closely interwoven with the actual needs of the institution, and the point of view of girls who learn sewing there must be quite different from that of girls who learn fine sewing and embroidery in most of the other institutions which have formal sewing classes. Their teaching is more or less incidental to the distinctly heavy work of replenishing the stock of clothing needed to supplement what parents give for their children. Nevertheless the educational motive is never forgotten. The pupils receive thorough instruction in both hand and machine sewing. There are five power machines and some of the girls have learned to operate them.

The following schedule shows work done by the two groups of girls who are learning sewing:

Less Advanced Class	*Advanced Class*
Monday	Monday
Plain sewing 1½ hours	Cutting 1 hour
	Plain sewing 1 hour
Tuesday	Tuesday
Mending 1 hour	Mending 1 hour
Knitting ½ hour	Knitting 1 hour
Wednesday	Wednesday
Mending 1 hour	Mending 1 hour
Crocheting ½ hour	Crocheting 1 hour
Thursday	Thursday
Plain sewing 1 hour	Cutting 1 hour
Crocheting ½ hour	Plain sewing 1 hour
Friday	Friday
Plain sewing 1 hour	Plain sewing 1 hour
Knitting ½ hour	Lace-making 1 hour

The all-round nature of their training is evident from this schedule. The advanced pupils are not confined to plain work altogether; some pretty though simple embroidered towels, knitted slippers in gay colors, and other small articles, are made. All the products of the sewing room are used in the institution, or given by the girls to their relatives and friends. At present there are 12 girls in the less advanced class, and two are doing advanced work in sewing.

ORGANIZED TEACHING PRELIMINARY TO VOCATIONAL TRAINING

The informal but effective teaching which grows out of the life of a large residential institution is seen at its best in the larger convalescent hospitals. Formal classes in occupational training, meeting at definite hours and receiving instruction from special teachers who usually give all their time to teaching, are most highly developed in the private day schools, although excellent work of this kind is done at several of the residential institutions. Three grades of hand work can be distinguished: first, elementary kindergarten or manual training work; second, basketry, chair-caning, and the making of small fancy articles; third, direct training for self-support in occupations which offer reasonable opportunities for crippled children to earn their living after they leave the institution. The different grades of hand work will be discussed briefly in the order mentioned.

Many of the children lay the foundation for later industrial training in kindergarten classes. Fifteen of the residential institutions have such classes. The children learn to cut paper, make small articles from cardboard, weave mats with strips of paper or yarn, and sometimes to make mats from raffia. In four of the residential institutions and one of the day schools, kindergarten work is carried further than in most kindergartens, and some of the children have learned to make rather good baskets, boxes covered with cretonne, and similar articles. Courses in manual training or sloyd are offered in eight of the residential institutions and one of the day schools. In these classes boys learn the use of tools in making articles from wood. Sometimes small book holders or other articles are made; but the chief aim of the work is not the making of articles but the teaching of principles and the training of the boys' minds and hands.

In most of the institutions the first kinds of work usually taught by which the children may later earn money are sewing, basketry, and chair-caning. Sewing is taught in almost three times as many institutions as any other one subject, but much of it has only a slight vocational bearing. Many of the girls in asylum homes do mending and very simple sewing continuously, and there is no opportunity for them to advance very far beyond the stage which they reach soon after beginning the work. The sewing which may be regarded as genuine preparation for self-support will be discussed, with other methods of direct occupational training, later in this chapter. The making of baskets and caning of chairs have become traditional occupations for people who must do sedentary work, especially for the blind. These kinds of work have been introduced into a number of institutions for crippled children because the children could learn to do the work easily, and because the kindergarten teacher or someone else, easily procurable, could usually give sufficient instruction in these subjects, when the teaching of other handicrafts would have required the employment of a special teacher. The making of simple burnt-wood articles, brass candle shades, and bead chains are also relatively simple processes which can usually be taught by the grade or manual training teacher.

All these branches of hand work are pedagogically useful as

further means of training beyond kindergarten work and sloyd. It is also true that money is received for these articles when sold at Christmas bazaars or other fairs. But it is almost unavoidable that the demand should be influenced by the desire of the purchaser to help the institution. The writer has yet to learn of any crippled child, taught in an institution to make these articles, who has been able to earn any large proportion of his living expenses continuously by any of these methods when he has left the school and attempted to do the work on his own responsibility. We believe that it is well to begin industrial training for crippled children with precisely these kinds of hand work, but there should always be an ultimate aim to lead as many children as possible into the kinds of work which are more profitable when put on a strictly commercial basis, and not to depend upon the selling of articles to people who buy because of their sympathy for cripples.

The institution which has most clearly and logically worked out the usefulness of these hand processes of a semi-vocational value is the Widener Memorial School. Apart from its training of children under direction of various employes which has already been discussed with the informal education of other convalescent hospitals, the Widener School has planned its hand work according to a careful and comprehensive program. It begins with kindergarten processes and leads through sloyd and simple woodwork for boys and basketry for girls to complete training for particular trades in special classes. Each boy has four years of sloyd work and each girl is in the basketry class for three years. In this class the girls also do some work with beads and brass. They have sometimes designed boxes which the boys have made up in their wood-working classes. The boys' classes have stenciled cushions which the girls have later embroidered with raffia. The classes meet each week for sessions of from two to five hours.

All of this hand work is regarded as desirable as a preliminary training in the use of the hands and as a possible source of income in after years. While such work seldom provides an adult with a sufficient source of livelihood, a cripple who loses his regular position or is temporarily confined to his home, could earn some money by these methods and might at any time add to his regular income by doing such work at odd hours.

ORGANIZED TRAINING FOR SELF-SUPPORT

The hand work which we have placed in a third class includes many different occupations in which it is expected that crippled children trained in the institution will be able to earn all or part of their own support. It has already been stated that most of the training in domestic science is incidental to helping with the housework in residential institutions. But there are regularly organized cooking classes for the girls in four residential institutions and at the Industrial School for Crippled Children at Boston. The usual aim in teaching crippled girls cooking or other domestic science is to prepare them for some usefulness in the homes of their parents when they leave the institution, or, in some cases, for work in homes of their own after marriage. It is comparatively seldom that domestic service is advocated for crippled girls, because it is usually assumed that not many of them are sufficiently strong or agile to do general housework.* There seems to be no reason why a girl whose general health is good should be debarred from domestic service because of a limp or other slight defect, but she can probably secure a position as nurse maid or mother's helper more easily than a place as general servant.

VOCATIONAL TRAINING IN PRIVATE DAY SCHOOLS

We have found only four private day schools which carry on vocational training. Their work is summarized in the following statement:

Private Day Schools Giving Vocational Training

Massachusetts, Boston	
Industrial School for Crippled and Deformed Children	Sewing, embroidering, cooking, advanced kindergarten work, manual training, basketry, cobbling, chair-caning, printing, proofreading
New York City	
Crippled Children's East Side Free School	Hand and machine sewing, embroidering
Rhinelander School	Sewing, embroidering, jewelry making
William H. Davis Free Industrial School for Crippled Children	Sewing, embroidering, leather tooling, burnt wood work, wood carving

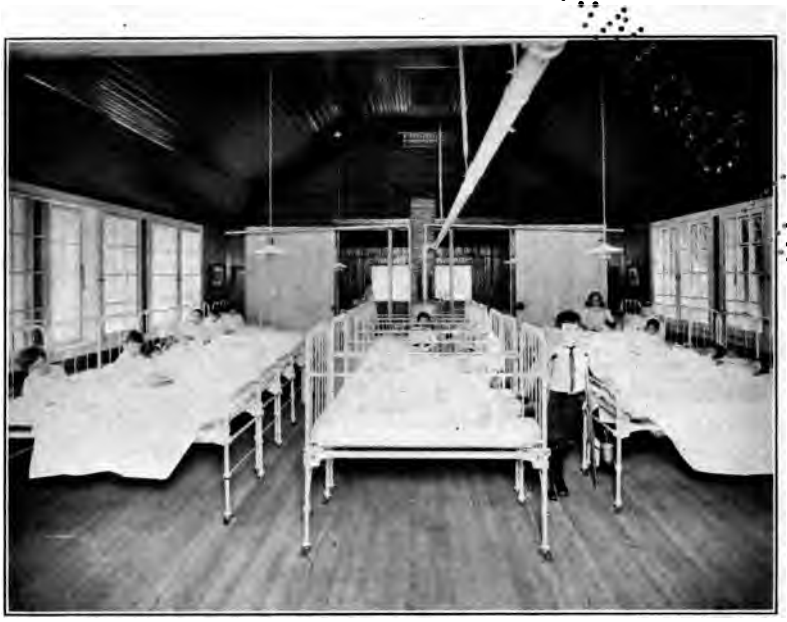
* See page 73. The House of St. Michael and All Angels has trained several colored girls successfully for domestic service.

All of these four day schools with industrial training teach most, if not all, of the girls in sewing and embroidery classes. At the Industrial School for Crippled and Deformed Children in Boston, the Crippled Children's East Side Free School, and the Rhinelander School in New York, plain sewing, fancy stitches of many kinds, and the making of complete garments are taught. A smaller number of girls at the William H. Davis Free Industrial School for Crippled Children make articles such as small aprons, pincushions, bags, and so forth, for sale at their fairs. Many of the girls have learned to do very beautiful work and the products bring good prices.

Three schools have made hand-embroidered towels with considerable success. At the Rhinelander School towels with borders of Swedish drawn work have been sold for as much as $45 a dozen. The different schools have attained fame for different kinds of work.

At the Crippled Children's East Side Free School beautiful initial embroidery is done. Many elaborate trousseau sets have been made for special orders. The girls do all the sewing on these garments by hand, including putting in lace insertion and making very fine tucks. The school makes also all kinds of aprons, boudoir caps, and women's undergarments. Machine sewing has recently been introduced and inexpensive aprons of gingham and other material are cut and made by the children. The needle trades classes have been successful as to quality of the work done, the demand for the articles, and the proportion of their cost covered by the receipts. The sewing classes have an enrollment of 26. All of the workers receive regular wages and give their full time to the work. They are brought to the school by a bus and are given a hot meal at noon. Two boys have been included in the embroidery class, and it is hoped that boys may profit by the opportunity to do machine sewing. The school has not otherwise succeeded in finding a successful subject for the trade training of boys.

At the Boston school the girls receive regular instruction in sewing, under special teachers, and are graded according to age and capacity from the third to the eighth grammar grade. They do fairly advanced work, including the making of simple dresses.



Surgical Pavilion, Interior

The Play Hour. (See page 168)
HOUSE OF ST. GILES THE CRIPPLE, Garden City, Long Island

"Seeking a Shrine." (A Legend of a Crippled Child)

Sleeping Porch

Main Building. (See page 169)

ST. CHARLES HOSPITAL FOR CRIPPLED CHILDREN, Port Jefferson, Long Island

For girls who have completed the eighth grade, there is opportunity to work in the sewing room all the time and receive wages. At the time of the writer's visit three girls were sewing continuously. The school is known especially for its cross-stitch embroidery on napkins, towels, and other table and bed linen, and for small children's dresses and rompers. The usual line of pincushions and other fancy articles may be seen, but in general the articles made are examples of careful plain sewing and unelaborate trimming.

The St. Charles Hospital for Crippled Children at Port Jefferson, New York, is the only one of the residential institutions which has classes whose members sew continuously all day. Three girls do both plain sewing and fancy work, including hemstitching, embroidery, cross-stitching and the making of dolls' and children's clothes. Two boys are learning the rudiments of tailoring. They have made several small suits for the younger children and white coats for the doctors. The children are very useful in helping with the necessary sewing of the institution, but each girl has opportunity to learn all the different stitches.

SPECIAL HANDICRAFTS

Other handicrafts than sewing, fancy stitches, and embroidery have been taught in a few institutions. At the Kernan Hospital School in Baltimore some of the girls in the sewing class have learned to make lace. At the Widener School and the New York State Hospital at Haverstraw, a good deal of stenciling is done. At West Haverstraw designs are transferred by wood blocking. The success of the teacher at West Haverstraw in teaching children to make their own designs is especially notable. The Kernan Hospital School has a small loom and some creditable work in rug weaving has been done. At the Widener School, the Kernan Hospital School, and the William H. Davis Free School (a day school) the children have made articles of burnt wood. Leather tooling for pillow and table covers and chair upholstery is beautifully done at the William H. Davis Free School. The teacher of all their work in leather and wood is a former pupil of the school, still slightly crippled. He has artistic ability in making designs and considerable skill in execution. He and two or three of the older boys produce many elaborate tooled pieces of leather.

At the Rhinelander School in New York there is a jewelry class for boys, taught by an expert jeweler who was formerly employed in a high grade shop. The capacity of the class is about 14, and there are usually from eight to 12 members. The boys work on a two years' apprenticeship basis. They pay no tuition and receive no pay for their work except for occasional pieces made to order, upon which they may work after the short hours of the session, which are from nine to three. The boys are taught both the making by hand of artistic pieces and the processes which they need to know in order to secure positions in a regular commercial jewelry shop. There is a belief on the part of those in charge of the class that it would not be wise to teach "arts and crafts" processes only, because often a boy would earn less through selling hand-made pieces than he would when working for wages at machine work in a jewelry factory. The members of the Brearley League, which maintains the industrial classes at the Rhinelander, have had considerable difficulty in finding enough boys for the jewelry class. Their difficulty in finding pupils has already been discussed. Some boys are not eligible because their hands are not adapted to the fine details of jewelry making; others lack the good eyesight which is required for admission to the class.

Of the three kinds of clerical work given in Table VIII, proofreading is taught at the Industrial School for Crippled and Deformed Children in Boston. Library work, stenography and typewriting have already been mentioned as carried on informally in residential institutions.

MECHANICAL TRADES

There have been several successful efforts to teach crippled children mechanical trades. Stationary engineering and practical carpentry at the Massachusetts School and the Widener School have already been mentioned. Very elementary carpentry work is done by some of the children at the Hospital for the Ruptured and Crippled in New York. Simple furniture making is taught by industrial teachers in three of the residential institutions: namely, the Phalen Park section of the Minnesota State Hospital, at the New York State Hospital, and the Industrial Home for

Crippled Children in Pittsburgh. At Phalen Park, Minnesota, book and magazine holders are made; at West Haverstraw, New York, some of the children have made very good wooden toys and a few tabarets and telephone stands. The work is farther advanced at the Pittsburgh Home, and six of the boys have done sufficiently advanced work in the making of magazine holders, boxes to hold shoe-blacking outfits, and small tables, so that it could be called vocational. They have made a number of work tables resembling camp stools, with tops divided into two parts joined by hinges so that they can be closed when one wishes to move the table. These tables are covered with cretonne and have large pockets underneath. They have sold readily at $5.00 each. The manual training courses at the Boston school consist chiefly of sloyd work, but the pupils have made excellent wooden toys and some small pieces of furniture.

The most elaborate woodwork is done at the William H. Davis Free Industrial School. Wood carving in varied patterns designed by the teacher, a former student in the school, is done with the help of two or three of the older boys now in the school.

Elementary bookbinding and repairing are taught at the Nebraska Orthopedic Hospital. The children work chiefly on the books in the library of the institution which need repairing, under a non-resident teacher. The equipment includes a stamping press, two sewing benches, a card cutter, and necessary supplies. Eight girls and two boys are in the class. The same teacher has three boys studying printing.

The Industrial School at Boston has a printing plant which compares very favorably as to its equipment and the quality of work turned out with commercial establishments of high standing. Eight boys and three young women give their entire time to the work in the shop. The plant is in charge of an experienced printer who is not himself a cripple. He estimates the value of the equipment as between $4,000 and $4,500. It includes five presses and cases of type, a paper cutter, a wire-stitching machine, and a loose-leaf binder. In this shop, as in other departments of the Boston school, children who are still in the grades come for brief sessions. At the time of the writer's visit four grade pupils were coming every day for from one to two hours. The atmosphere of the work-

shop is altogether businesslike; but the printer does not lose sight of the main educational purpose and beginners receive sufficient attention. The employes who give their entire time to printing work from 9 to 5. Another hour is sometimes added in rush seasons, but the usual day is seven hours, an hour less than the eight-hour limit set by the printers' union. The possibility for special consideration for workers below the normal in a shop where ordinary cripples are employed is interestingly illustrated in the case of a boy who is not as strong as the others. He rests from 11 to 12 every day and leaves at 4 instead of 5. Much of the work done by the plant is in the filling of small private orders, but they receive larger commercial contracts occasionally. They have printed the magazine of the Boston Girls' Latin School. The shop turns into the treasury of the school each year a small amount over and above its own expenses for materials and wages, but, of course, with no account for rent, heat, or light.

Mention should be made of the chair-caning and basketry work at the Boston school because it is conducted successfully on a commercial basis. This department netted the school $100 in 1911, after paying for its own material and wages.

Cobbling has been taught at the Boston school, but no shop for commercial work has been developed.

FINE ARTS

Of the fine arts, only music has been taught in institutions for crippled children as a possible direction for vocational training. Simple class work in music and drawing for children in the grades has not been included in our tables. At four of the institutions music lessons are given to many of the children. Individual children in other institutions have sometimes received music lessons because of special ability. Many piano lessons are given at the Massachusetts Hospital School and at the House of the Annunciation in New York. At the Widener School a music teacher is busy giving individual piano lessons for three and a half hours on two different days in the week. The boys of the school are organized into two bands, with a visiting band master and opportunities to learn to play any of the instruments. Music is regarded at the Widener School not only as a cultural asset but as a possible

source of income to the children after they leave the institution. Music is taught at the Virginia T. Smith Home for Incurables at Newington, Connecticut.

DISPOSAL OF THE ARTICLES

The articles made in the institutions are disposed of in various ways. In all the residential institutions many of the articles made by the children are used in the buildings. This is true not only of the products of the sewing rooms but of other miscellaneous articles. For example, some of the children at the Widener School have re-caned chairs used in the institution; baskets made by the children are used in the offices of the Kernan Hospital School; at Phalen Park, Minnesota, the children have made leather napkin rings for all the residents of the institution; at the Massachusetts Hospital School large numbers of moccasins have been made and the boys are required to wear them while indoors. The printing at the Nebraska State Hospital and the Massachusetts Hospital School includes various kinds of blank forms needed in the institutions.

All four of the private day schools which have industrial classes make goods to order. Three of the schools, the Industrial School in Boston, the Crippled Children's East Side Free School, and the William H. Davis Free School in New York, receive a considerable share of their income from fairs at which all the different products of the schools are sold. The Boston school rented part of a small store on Boylston Street for four weeks before Christmas and very profitable sales resulted. The two schools mentioned in New York have held sales on their own initiative in hotels, and have also sold goods at booths during general exhibitions like the Woman's Industrial Exhibition held at the Grand Central Palace in February, 1913.

Half a dozen of the residential institutions have also made articles for sale, but the receipts have not represented any noticeable proportion of the cost of maintaining industrial teaching. The Kernan Hospital School has held no fairs in its own name but has sent articles to bazaars and to the Women's Exchange in Baltimore. One hundred dollars was realized in one year. One-third of the amount for each article is given to the children; from the

remaining two-thirds materials are paid for and any balance is used by the institution for purchasing some needed piece of equipment for the school work.

Fairs have been held at Christmas time at the Widener Memorial School. Two hundred dollars' worth of articles made by the children was sold last year. One-fourth of the selling price was returned to the school to pay for materials, and three-fourths of the amount was entered in the bank accounts of the children who made the articles. At Christmas time and during Lent, articles of needlework are offered for sale at the Home of the Merciful Saviour in Philadelphia. The children have given to foreign missions the money realized for articles sold during Lent. At the Industrial Home in Pittsburgh, the Peabody Home in Hyde Park, Massachusetts, the Home for Incurables in Philadelphia, the Convalescent Home for Destitute Crippled Children in Chicago, and formerly at the House of St. Giles the Cripple, now in Garden City, fairs or teas have been held occasionally in the institution, at which the work of the children was offered for sale. Articles have occasionally been made for sale, upon order, at the New York State Hospital.

Realizing money through the sale of goods is always a minor object in the maintenance of occupational classes. In those day schools where the young people who work all day receive wages, the sales sometimes cover the wages and the cost of materials, but the surplus after these payments are made never equals the teachers' salaries, rent, heat, light, and other expenditures. It should be remembered also that the sale of goods under the name of a charitable institution usually does not test in any degree the actual market value of the products, or show whether or not the crippled young people will be able to secure similar prices by making the same things outside of the institution.

CONCLUSIONS

This study reveals the wide variety of pursuits by which many of the institutions are preparing cripples to earn a part or all of their own support. The opinion is practically unanimous that needle trades, including plain sewing, embroidery, and possibly millinery, solve the problem of wage-earning for large numbers

of crippled girls. There is also general agreement that manual training, in addition to its other advantages, helps to fit crippled boys, as well as other boys, for later work which has direct vocational bearing. But no one occupation or group of occupations is regarded as so universally practicable for crippled boys as the needle trades are for crippled girls. Only a few institutions have tried any one of the other occupations, and there is much difference of opinion as to the respective merits of the various occupations mentioned in this chapter.

It is not our purpose to advocate here the general acceptance of any one of the occupations under discussion, because, first, the conditions of employment in given occupations as to health conditions of the places of work, hours, wages, and prospects of advance have not been studied in sufficient detail, even for industries as a whole, still less for a specific locality; second, the ability of different types of cripples to perform the various kinds of tasks imposed by the given occupations has not been determined.

It is obvious that studies for the purpose of securing information about employment conditions are needed for the guidance of young people, whether they are crippled or not. Such studies must usually be within a limited range of territory, sometimes one state, often only a single city, in order to have the fullest value. People who are interested in the vocational training and guidance of crippled children should keep closely in touch with every movement whose aim it is to secure information which furnishes a basis for a program of vocational training. The pamphlets on particular kinds of employment issued by the Women's Educational and Industrial Union of Boston are excellent examples of such local studies. All general information on the subject helps to simplify the choice of occupations to be taught in institutions for cripples by showing the relative advantages of the different occupations for any young person.

For cripples who remain in any degree handicapped, we need, in addition, knowledge of the particular kinds of work for which each type of cripple is not incapacitated by his physical defect. Studies of this sort made in different localities would furnish a basis of generalization as to how far specific handicaps prove a hindrance or make work possible in a given occupation. Machine

work in a factory should be undertaken by a cripple only after he is sure that neither the ordinary movements he must perform, nor those necessary in case of accident, require physical effort of which he is not capable. The experience of cripples graduated from special schools, and the success or failure of individual cripples who have entered different occupations on their own initiative without coming from an institution, would, if gathered together, furnish practical information as to the degree to which certain physical defects hinder or prevent success in different kinds of work.*

So long as the two kinds of information mentioned are not available we do not feel prepared to recommend specific trades as better than others for introduction into schools for cripples. If a crippled child has sufficient ability and if necessary funds can be secured for his education in one of the professions where the work is chiefly mental, his problem becomes an easy one; but these cases are rare. For those who lack special mental ability, or for whom it is not possible to secure the money necessary for the undertaking of long years of training, the best opportunities seem to be in the direction of skilled handicrafts, including needle trades of all kinds, commercial engraving, mechanical drawing, the making of articles from wood, reed or metal, printing, cobbling, manicuring, and photography.

* A list of graduates from the Industrial School for Crippled and Deformed Children in Boston, with the wages they are earning and the cause of crippling in each case, is given in the Appendix, p. 235.

KERNAN HOSPITAL AND INDUSTRIAL SCHOOL FOR CRIPPLED CHILDREN, Baltimore. (See page 159)

Main Building. Sleeping Porch and Sun Parlor in the Rear
CHILDREN'S HOSPITAL SCHOOL, Baltimore. (See page 158)

Surgical Pavilion
HOUSE OF ST. GILES THE CRIPPLE, Garden City, L. I. (See page 168)

CHAPTER V

STATISTICS

STATISTICAL information with reference to the institutions for crippled children has been gathered with great care and an effort has been made to standardize it as nearly as possible. This has been a difficult task because of the difference in methods of bookkeeping and because of the lack of any standard as to building equipment; nevertheless, it will be seen that the results are very significant.

SUMMARIES OF STATISTICAL TABLES

In discussing the statistics of the institutions for crippled children summaries have been prepared in order to bring out the most salient and significant facts in outline. The reader is referred to the tables themselves for details.

CAPACITY AND NUMBER OF CHILDREN IN CARE DURING YEAR IN 37 INSTITUTIONS

(Summarized from Table I, pp. 108–111)

Group of institutions	Beds for children	Average number of children in care during year	Total number of children in care during year
10 Hospitals	846	662	3,064
14 Convalescent hospitals or homes	1,219	945	1,391
13 Asylum homes	409	361	446
37 Institutions	2,474	1,968	4,901

Group of institutions	Average number children in care per institution		
	Minimum	Maximum	Average
10 Hospitals	10	192	66
14 Convalescent hospitals or homes	25	229	68
13 Asylum homes	6	87	28
37 Institutions	6	229	53

The total capacity of the 10 hospitals is 846. They cared for 3,064 children during the year, with an average of 662, which was 78 per cent of the capacity, leaving an average of one-fifth of the beds unoccupied during the year. They range in size from the New Jersey Orthopaedic Hospital at Orange with 16 beds, to the Hospital for the Ruptured and Crippled in New York with 250 beds. There are four with a capacity of 16 to 57; three with a capacity of 65 to 70, and three with a capacity of 100 to 250. The capacities of the 10 hospitals are as follows: 16, 50, 56, 57, 65, 70, 70, 100, 112, and 250; average, 85.

The total capacity of the 14 convalescent hospitals or homes is 1,219. They cared for 1,391 children during the year, an average of 945, which was 78 per cent of the capacity, leaving an average of over one-fifth of the beds unoccupied during the year. They range in size from the Van Leuven Browne School at Detroit, with a capacity of 30 and an average of 25, to the Massachusetts Hospital School with a capacity of 250 and an average of 229. There are five with a capacity of 50 or less; five with a capacity of 55 to 85; three with a capacity of 100 to 200, and one with a capacity of 250. The capacities of the 14 convalescent hospitals or homes are as follows: 30, 32, 42, 50, 50, 55, 60, 60, 75, 85, 100, 130, 200, and 250; average, 87.

The total capacity of the 13 asylum homes is 409. They cared for 446 children during the year, an average of 361, which was 88 per cent of the capacity, leaving an average of one-eighth of the beds unoccupied during the year. They range in size from "Happy Haven" in Chicago, with a capacity of six, to the Virginia T. Smith Home at Newington, Connecticut, with a capacity of 100. There are five with a capacity of 20 or less; four with a capacity of from 25 to 30; three with a capacity of 33 to 50, and one with a capacity of 100. The capacities of the 13 asylum homes are as follows: 6, 12, 18, 20, 20, 25, 30, 30, 30, 33, 35, 50, and 100; average, 31.

The 37 institutions combined have a capacity of 2,474. They cared for 4,901 different children during the year, with an average of 1,968, which was 80 per cent of their total capacity, which would leave an average of one-fifth of the beds unoccupied during the year.

RATIO OF CHILDREN TO EMPLOYES IN 36 INSTITUTIONS
(Summarized from Table I, pp. 108–111)

Group of institutions	Average number of children in care during year	Employes
9 Hospitals[a]	599	319
14 Convalescent hospitals or homes	945	400
13 Asylum homes	361	117
36 Institutions	1,905	836

Group of institutions	Ratio of children to employes		
	Minimum	Maximum	Average
9 Hospitals[a]	1.6	3.2	1.9
14 Convalescent hospitals or homes	1.2	6.1	2.4
13 Asylum homes	2.0	6.0	3.1
36 Institutions	1.2	6.1	2.3

[a] Not including Minnesota State Hospital, which uses the unreckoned services of employes of the St. Paul City and County Hospital.

The residential institutions have a large number of employes, skilled and unskilled, in addition to the surgeons who perform operations and exercise a general oversight over the treatment of the children. The total number of employes in the nine hospitals is 319, or one employe to every 1.9 children. The number ranges from one employe to 1.6 children at the New York Orthopædic Hospital and the Hospital for Deformities and Joint Diseases in New York City, to 3.2 children for each employe in the Home for Crippled Children at Newark, New Jersey. The average would be raised to one employe for every 2.0 children if we included the city branch of the Minnesota State Hospital, which is credited with only one employe for 5.7 children, a number which is explained by the fact that only employes working exclusively with crippled

children are counted, although a number of other employes in the St. Paul City and County Hospital, with which the state hospital is connected, do work for the crippled children as well as for the other patients in the hospital. The number of children for each employe in nine hospitals is as follows: 1.6, 1.6, 1.7, 1.8, 1.8, 2.1, 2.1, 2.6, and 3.2; average, 1.9.

The total number of employes in the 14 convalescent hospitals or homes is 400, or one to every 2.4 children. There is a wider range between the different institutions in this group than is the case with the hospitals. The most liberal provision is at the Widener Memorial School at Philadelphia, where there is one employe for every 1.2 children. At the other extreme, the St. Charles Hospital at Port Jefferson, New York, has one employe for every 6.1 children.* Nine of the convalescent hospitals have 2.3 or more children to each employe. The number of children for each employe in 14 convalescent hospitals or homes is as follows: 1.2, 1.4, 1.7, 1.8, 1.9, 2.3, 2.4, 2.7, 2.8, 3.1, 3.2, 3.5, 3.5, and 6.1; average, 2.4.

The 13 asylum homes have a total of 117 employes, or an average of one to 3.1 children. The ratio is extremely varied, as in the case of the convalescent hospitals. The six children at "Happy Haven," in Chicago, are all cared for by one person. The most liberal provision is at the Children's House of the Home for Incurables in Philadelphia, where there is one employe to each 2.0 children. Only four of the asylum homes have less than three children to each employe. The number of children for each employe in 13 asylum homes is as follows: 2.0, 2.1, 2.6, 2.8, 3.0, 3.1, 3.3, 3.6, 3.6, 4.0, 4.2, 5.5, 6.0; average, 3.1.

It will be seen that the proportionate number of employes is greatest in the hospitals, where most of the patients are in bed and closer attention is necessary. The convalescent hospitals have more employes than the asylum homes, partly because they approach more nearly to hospital standards of physical care and liberal educational provisions, partly because their incomes are more liberal.

It requires more than twice as many employes in proportion

* This includes only employes who devote most of their time to cripples. If the work of persons giving all of their time for cripples were included, the ratio of children to employes would probably be 4.0 or 5.0.

to the number of children to care for crippled children as it does to care for dependent or delinquent children in institutions. Many of these employes are trained nurses or other persons of special training, necessitating a high scale of wages. The relative increase in employes makes an increase in expense of food, furnishings, fuel, upkeep, and so forth, all of which contributes to the unavoidable increase of current expenses as compared with those of institutions intended for well children.

FLOOR SPACE IN INSTITUTIONS FOR CRIPPLED CHILDREN

Table 11 is a comparison of the floor space available for different purposes in institutions for crippled children.

With proper ventilation and sanitary equipment, and with an abundance of porch space for outdoor living and outdoor sleeping, the question of cubical space per child becomes a secondary consideration. The height of stories will vary with the ideas of the individual architect and with the requirements of different climates. As a rule, higher stories will be built in southern climates than in northern climates. In modern hospitals, dormitories and children's wards are usually arranged with windows on three sides, or, at least, with cross ventilation.

The floor space used for different purposes in the 33 institutions for which definite and comparable figures are available has been reduced to per capitas. At first glance there would seem to be no standards whatever; but when we come to consider averages we find that they do not vary much from the averages of other well planned institutions. They may be summarized as follows:

FLOOR SPACE PER CHILD IN 33 INSTITUTIONS[a]
(Summarized from Table II, pp. 112–117)

Group of institutions	Square feet of floor space per child for			
	Children	Employes	Miscellaneous purposes	All purposes
9 Hospitals	111	55	148	314
12 Convalescent hospitals or homes	117	38	98	253
12 Asylum homes	151	41	137	329
33 Institutions	121	44	122	287

[a] For institutions omitted see notes to Table II, pp. 113, 115, 117.

There is a wide diversity in the amount of floor space per child in different institutions, ranging all the way from 106 square feet for all purposes in the St. Charles Hospital for Crippled Children at Port Jefferson, New York, to 526 square feet in the Country Branch of the New York Orthopædic Hospital at White Plains. Nevertheless, when we take an average of all the 33 institutions, we find a standard which agrees remarkably with that of other well organized institutions for children. In "Cottage and Congregate Institutions,"* a description of 50 typical institutions for dependent and delinquent children, it was shown that the average floor space for all purposes in the 50 institutions was 257 square feet per child. The average for the 33 institutions for crippled children, as above stated, is 287 square feet per child, for all purposes. The average floor space for the personal use of the children in the 50 cottage and congregate institutions was 128 feet. The average floor space for the personal use of children in the 33 institutions for crippled children, as shown above, is 121 square feet per child. The difference might easily be accounted for by the fact that many of the crippled children are bed cases and there is, therefore, less need of sitting room space and dining room space than in institutions for normal children.

The floor space for dormitories varies from 28 to 88 square feet per bed, averaging 53 square feet. The average dormitory floor space in the 50 cottage and congregate institutions was 44 square feet per child. In nearly all of the institutions studied the dormitories have abundant ventilation, and 13 out of 33 have outdoor sleeping porches for a number of the children. The floor space, therefore, is adequate in most of them.

Referring to the summary on page 97: when the institutions for crippled children which are now housed in old residences come to be located in adequate modern buildings, the amount of space required will probably correspond even more closely with that in the cottage and congregate institutions for dependent and delinquent children than it now does. It is to be expected that, in practical experience, the average space employed in institutions

* Hart, Hastings H.: Cottage and Congregate Institutions for Children. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1910.

conducted by competent and experienced people will approximate closely the amount actually necessary. Some institutions may use too little space on account of poverty; others may use too much, because of bad planning; but in the end reasonable standards will be found, as has already been done in the case of the institutions for dependent and delinquent children.

DORMITORY FLOOR SPACE PER CHILD IN 33 INSTITUTIONS[a]
(Summarized from Table II, pp. 112–117)

Group of institutions	Square feet of floor space per child for dormitories		
	Indoor	Outdoor	Total
9 Hospitals	54	5	59
12 Convalescent hospitals or homes	40	7	47
12 Asylum homes	54	5	59
33 Institutions	47	6	53

Group of institutions	Square feet of floor space per child for dormitories		
	Minimum	Maximum	Average
9 Hospitals	49	85	59
12 Convalescent hospitals or homes	28[b]	87	47
12 Asylum homes	40	88	59
33 Institutions	28[b]	88	53

[a] For institutions omitted see notes to Table II, pp. 113, 115, 117.

[b] This minimum of floor space for dormitories was in St. Charles' Hospital for Crippled Children, but their dormitory space has since been increased to about 32 square feet per bed.

There is one respect in which the provision made by the institutions for crippled children is much less liberal, as has been mentioned, than that made by the cottage and congregate institutions for dependent and delinquent children; namely, in the provision of space for the accommodation of officers and employes.

In the 50 cottage and congregate institutions, provision is made for 2,206 employes with an average of 264 square feet of floor space for each. In the 33 institutions for crippled children provision is made for 600 officers and employes at the rate of only 166 square feet for each. The rate for the hospitals is 170 feet; for the convalescent hospitals or homes, 160 feet; and for the asylum homes, 168 feet for each employe, including dormitories, sitting rooms, baths, toilets, closets, and so forth.

It is exceedingly important that people who are called upon to perform such responsible and exacting duties as those required for inmates of this class should have such accommodations for sleeping and recuperation as will keep them in good condition for their work. It is very difficult to keep high grade employes unless such accommodations are provided, and this matter should be carefully watched in plans for future institutions.

COST OF PLANT

Table III is a comparison of the cost of plants of the different institutions for crippled children. The statement on page 99 summarizes the cost of plant per child in 30 institutions. At first sight there would seem to be a hopeless variation, for the cost of lands, buildings, and equipment per bed ranges all the way from $302 to $5,190 per bed; but on examining the averages some fairly definite standards are indicated.

In the summary of Table III, referred to above, the seven hospitals show an average cost of $2,747 per bed. This high rate for cost of plant is partly due to the cost of land, which averages $617 per bed. It is partly due to the equipment which is necessary to any well ordered hospital, and is partly due to the fact that a number of the hospitals have considerable space devoted to dispensary work for out-patients. and also due to graft.

The 12 convalescent homes, for which data are available, show an average cost of $1,294 per bed, less than half that of the hospitals. This lower cost is partly due to the fact that the convalescent homes are located on country sites where the cost of land is insignificant. It is partly due to the fact that several of these homes are inadequately housed, and when they shall have built

adequate homes the average cost will probably reach $1,600 or $1,800 per bed.

COST OF PLANT PER CHILD IN 30 INSTITUTIONS[a]
(Summarized from Table III, pp. 118–120)

	7 Hospitals	12 Convalescent homes	11 Asylum homes	30 Institutions
Beds for children	690	1,077	373	2,140
Total cost of lands, buildings, and equipment	$1,895,400	$1,393,300	$404,600	$3,693,300
Cost per bed				
Lands and buildings	$2,599	$1,155	$1,013	$1,595
Surgical and gymnastic equipment	49	18	8	26
Furniture and educational equipment	87	104	55	91
Miscellaneous items	12	17	9	14
Total	$2,747	$1,294	$1,085	$1,726

Group of institutions	Cost of plant per child per institution		
	Minimum	Maximum	Average
7 Hospitals	$920	$5,190	$2,747
12 Convalescent hospitals or homes	302	3,232	1,294
11 Asylum homes	453	2,739	1,085
30 Institutions	$302	$5,190	$1,726

[a] Based on capacity; including cost of lands, buildings, and equipment. For institutions omitted see notes to Table III, pp. 118, 119, 120.

The 11 asylum homes show an average cost of $1,085 per bed. Asylum homes cost less than convalescent homes because their buildings are of a simpler character. It is probable, however, that when these asylum homes are adequately housed the difference in cost in favor of the asylum homes will not be great. The per capita cost of asylum homes as they now stand is less

than that of the average cottage institution for healthy orphan children; whereas it ought to be probably a little more.

Owing to the wide range of cost and the great difference in size and quality of buildings, study of individual institutions as shown in the statistical tables is necessary for an intelligent comparison.

The cost of land averages $617 per bed for the seven hospitals which are located in cities where property is expensive, and only $165 per bed for 16 convalescent homes and asylum homes which are located, usually, in the country, where land is cheap.

The cost of lands and buildings together is shown to be $2,599 per bed for seven hospitals; $1,155 per bed for 12 convalescent hospitals or homes, and $1,013 for 11 asylum homes.

The cost of furniture, equipment, and miscellaneous items is $148 per bed for the seven hospitals; $139 per bed for the 12 convalescent hospitals or homes, and $72 per bed for the 11 asylum homes.

CURRENT EXPENSES

Table IV exhibits the annual current expense per child for 34 institutions, three being omitted because the figures are not comparable. The amounts expended are as given on page 101.

The proper care of crippled children is necessarily very expensive. They need airy dormitories with good beds, spacious sitting rooms, and comfortable surroundings, in order to build up their frail bodies; they need an abundance of good food, milk, cream, butter, eggs, fresh vegetables, meats, and fresh fruit. They need skilled nursing, and a large amount of help is required because the children themselves are able to render but little service. Gymnastic apparatus and expensive braces add materially to the expense. The total cost per child is as follows: In the hospitals, $570; in the convalescent homes, $348; and in the asylum homes, $267; the average for all classes being $406, or $1.11 per day. This expenditure seems large, but is not extravagant. It represents the actual cost of the proper care of such children, and it brings direct returns in the restoration of children to health and self-dependence.

CURRENT EXPENSE IN 34 INSTITUTIONS[a]
(Summarized from Table IV, pp. 121–124)

Group of institutions	Average number of children in care during year	Current expense
9 Hospitals	599	$341,450
13 Convalescent hospitals or homes	849	295,295
12 Asylum homes	355	94,853
34 Institutions	1,803	$731,598

Group of institutions	Current expense per child		
	Minimum	Maximum	Average
9 Hospitals	$233	$977	$570
13 Convalescent hospitals or homes	153	553	348
12 Asylum homes	184	431	267
34 Institutions	$153	$977	$406

[a] Based on average number of children. For institutions omitted see notes to Table IV, pp. 121, 123, 124.

The corresponding expense for normal dependent children in cottage institutions ranges from $159 to $272 yearly per child, averaging $196.

The compensation of employes forms a large part of the expense. It runs as follows:

SALARIES AND WAGES PER CHILD IN 34 INSTITUTIONS[a]
(Summarized from Table IV, pp. 121–124)

Group of institutions	Salaries and wages per child		
	Minimum	Maximum	Average
9 Hospitals	$81	$528	$241
13 Convalescent hospitals or homes	57	265	141
12 Asylum homes	40	184	90
34 Institutions	$40	$528	$164

[a] For institutions omitted see notes to Table IV, pp. 121, 123, 124.

The ratio of children to each employe in the hospitals is 1.9;* in the convalescent homes, 2.4; in the asylum homes, 3.1. These employes must be competent people of high grade and they command good wages.

The average cost for food in these institutions is about 20 cents per day, or $1.41 per week, for each person fed, including children and employes. This is a very moderate rate considering the kind of food which is necessary for these children.

FOOD COST PER PERSON FED PER YEAR AND PER DAY IN 34 INSTITUTIONS[a]

(Summarized from Tables II and IV, pp. 112–117 and 121–124)

	9 Hospitals	13 Convalescent homes	12 Asylum homes	34 Institutions
Average number of children in care	599	849	355	1,803
Average number of resident employes	251	261	93	605
Total number of persons fed	850	1,110	448	2,408
Total cost of food for year	$66,665	$80,605	$29,737	$177,007
Cost of food per person per year	78.43	72.62	66.38	73.51
Cost of food per person per day	.215	.199	.182	.201

[a] For institutions omitted see notes to Tables II and IV, pp. 113, 115, 117, and 121, 123, 124.

SOURCES OF INCOME

Table V shows the sources of income of 35 institutions, the figures for two institutions not being comparable. The summary on page 103 indicates income from four different sources.

Public funds form one-third of the income of the hospitals, nearly one-half of the income of the convalescent homes, and only one-seventh of the income of the asylum homes. Donations form nearly one-third of the income of the hospitals, one-fourth of the income of the convalescent homes, and nearly three-fifths of the income of the asylum homes. One-fifth of the income of the

*Not including Minnesota State Hospital, which uses the unreckoned services of employes of the St. Paul City and County Hospital.

35 institutions comes from invested funds, ranging from 18 per cent for the hospitals to 23 per cent for the convalescent homes.

SOURCES OF INCOME OF 35 INSTITUTIONS[a]
(Summarized from Table V, pp. 125–127)

Group of institutions	Per cent of income from				
	Public funds	Invested funds	Pay patients	Donations	All sources
9 Hospitals	33	18	18	31	100
14 Convalescent hospitals or homes	47	23	5	25	100
12 Asylum homes	14	21	3	62[b]	100
35 Institutions	36	20	10	34	100

[a] For institutions omitted see notes to Table V, p. 127.

[b] Including 6 per cent from miscellaneous sources.

The following table shows the ratio of the income from public funds to the total current expenses of the institution.

TABLE F.—RATIO OF PUBLIC FUNDS RECEIVED TO THE CURRENT EXPENSES OF 35 INSTITUTIONS[a]
(Not included in the general statistical tables)

Group of institutions	Total current expenses	Public funds	
		Amount	Per cent of current expense
10 Hospitals	$355,393[b]	$102,034	28.7
13 Convalescent hospitals or homes	295,295	145,124	49.1
12 Asylum homes	94,853	15,956	16.8
35 Institutions	$745,541	$263,114	35.3

[a] Not including the Widener Memorial School, Philadelphia, nor Happy Haven, Chicago. See Table IV, p. 127.

[b] This figure includes $13,943, the expenditure of the St. Paul State Hospital not included in Table IV.

It will be observed that out of $746,000 expended for the support of 35 institutions for crippled children, 35 per cent came

from public funds. The convalescent hospitals or homes received 49 per cent of their support from public funds. This larger ratio is due to the fact that the convalescent hospitals or homes include the state institutions of Massachusetts, New York, and Minnesota, which are supported entirely by public funds. The indications are that there will be a steady increase of institutions for crippled children maintained entirely by public funds.

Five of the 37 institutions are state institutions, maintained by state appropriations and controlled by state boards of trustees: two in Minnesota, and one each in Massachusetts, Nebraska, and New York. The remaining 32 institutions are controlled and administered by private boards of trustees, though some of them are subject to public inspection under the laws of the states in which they are located.

The number of institutions receiving money from the public treasury was 17, as follows:

TABLE G.—PUBLIC FUNDS; SOURCES AND AMOUNTS FOR ONE YEAR IN 17 INSTITUTIONS
(Not included in the general statistical tables)

Hospital	Public funds	
	Sources	Amount for one year
MAINE		
Portland		
Children's Hospital	State	$10,000
MINNESOTA		
St. Paul		
State Hospital (state institution)[a]	State	13,943
NEBRASKA		
Lincoln		
Nebraska Orthopedic Hospital (state institution)	State	45,060
NEW JERSEY		
Newark		
Home for Crippled Children	City	2,500
NEW YORK		
New York City		
Hospital for Deformities and Joint Diseases	City	7,730
Hospital for the Ruptured and Crippled	City	22,801
Total		$102,034

[a] Conducted in connection with St. Paul City and County Hospital.

TABLE G.—PUBLIC FUNDS; SOURCES AND AMOUNTS FOR ONE YEAR IN 17 INSTITUTIONS—(*Continued*)

Convalescent hospital or home	Public funds	
	Sources	Amount for one year
MARYLAND		
Baltimore		
Children's Hospital School	State	$3,750
Kernan Hospital and Industrial School for Crippled Children	State City	5,000 4,240
MASSACHUSETTS		
Canton		
Massachusetts Hospital School (state institution)	Cities and towns	64,958
MINNESOTA		
Phalen Park, St. Paul		
State Hospital and School for Crippled Children (state institution)	State	11,398
NEW YORK		
Garden City		
House of St. Giles the Cripple	Cities	6,495
Port Jefferson		
St. Charles Hospital for Crippled Children	City and county	19,294
West Haverstraw		
State Hospital for Crippled Children (state institution)	State	24,437
PENNSYLVANIA		
Pittsburgh		
Industrial Home for Crippled Children	State	5,000
Sewickley		
Sewickley Fresh Air Home	State	552
Total		$145,124

Asylum home	Public funds	
	Sources	Amount for one year
CONNECTICUT		
Newington		
Virginia T. Smith Home for Incurables	State and cities	$13,345
NEW YORK		
Buffalo		
Crippled Children's Home	Erie County	2,611
Total		$15,956
Grand total		$263,114

Each state institution takes only children who are residents of the state in question, and institutions receiving public grants usually give preference to children from the state or city from which money is received.

ADMISSION AND DISCHARGE

Table VI* is a summary of the rules of admission and discharge. Most of the institutions are liberal in the kinds of cases admitted, with the exception of cases of tuberculosis of the lungs, which the majority of them reject. Many of the convalescent and asylum homes exclude the feeble-minded, and a few exclude epileptics.

The length of stay both in the hospitals and the convalescent hospitals or homes for crippled children is much longer than in ordinary hospitals and convalescent homes, because the convalescence is so slow. It runs into months and years instead of days and weeks.

A most encouraging feature is that 15 out of 37 institutions maintain some helpful supervision of their patients after discharge.

The ages of admission run low. There is an increasing recognition of the importance of early help in order to accomplish a permanent cure.

No one of the 10 hospitals has any restrictions as to color. Of the remaining 27 institutions, 12 receive white children only, one receives colored children, and 14 do not draw the color line.

All of the 37 institutions receive free patients. In nine institutions all the beds are free; in 23 others the beds are usually free.

Seventeen out of 37 institutions have no geographical restrictions as to admission.

SCHOOL STATISTICS

Table VII† covers school statistics, sessions, and equipments. Schools are maintained by seven hospitals, all of the 14 convalescent homes and eight of the asylum homes; that is, in 29 out of 37 institutions.

As to vocational training, it is difficult to decide in some cases whether the work taught should be classed as vocational training

*See pp. 128–133. †See pp. 134–136.

or not, but it is probably fair to say that "vocational training" is undertaken in one hospital, five convalescent homes, and one asylum home. Four additional convalescent homes propose to introduce vocational training.

Teachers are supplied by the public school authorities for seven out of 29 schools. Special desks are used in only two schools out of 29. Desks adjustable as to height are used in nine schools. Non-adjustable desks are used in eight schools, while ordinary tables and chairs are used in 15 schools. Four schools use more than one kind of furniture for school purposes.

HAND WORK

Table VIII* gives details of instruction in hand work and vocational work. Eight hospitals and one convalescent home attempt none. In 10 of the remaining 28 institutions only sewing and simple housework are taught (with gardening in three cases). This means that these children receive no training in domestic science or vocational work beyond what can be given in the ordinary domestic routine in the institutions, which is ordinarily very little because the cooking and the service are not like that of an ordinary household.

DISPENSARIES

Table IX† gives a bare outline of the work done for cripples by nine hospital dispensaries located in seven cities. It appears from this table that about one-third of the dispensary work reported by the nine hospitals was done by one institution—the Hospital for the Ruptured and Crippled, New York City. We hesitated to accept these figures, but on second inquiry they were confirmed by the records of the institution.

Of the nine dispensaries, five are open six days in the week; one, four; one, three; and two, two days a week. Six are open two hours per day; one for one and one-half; one for three and one-half, and one varies from one to two hours.

Only three report systematic visits to homes of out-patients. This part of the work should by all means be developed. There is a great difference in the average number of visits paid to the dispensaries by each out-patient in a year, ranging from two to 14. The average daily attendance ranges from nine to 147.

*See pp. 137–139. †See p. 140.

TABLE I A.—SOURCES OF SUPPORT, CAPACITY, CHILDREN IN CARE, AND EMPLOYES IN 10 HOSPITALS

Hospital	Sources of support	Beds for children	Average number of children in care during year	Total number of children in care during year	Employes	Ratio of children to employes	Statistics for year ending [a]
ILLINOIS							
Chicago							
Home for Destitute Crippled Children	Private	112	87	151	34	2.6	Sept. 30, 1911
MAINE							
Portland							
Children's Hospital	Public and private	65	57	255	33	1.7	Dec. 1, 1912
MINNESOTA							
St. Paul							
State Hospital	State	70	63	155	11 [f]	5.7 [f]	July 31, 1911
NEBRASKA							
Lincoln							
Nebraska Orthopedic Hospital	State	100	70	153	40	1.8	Dec. 31, 1911
NEW JERSEY							
Newark							
Home for Crippled Children	Public and private	56	45	242	14 [g]	3.2	Dec. 31, 1911
Orange							
New Jersey Orthopaedic Hospital and Dispensary	Private	16	10	34	5 [h]	2.1 [k]	Dec. 1, 1912
NEW YORK							
New York City							
Hospital for Deformities and Joint Diseases	Public and private	57	49 [c d]	333	31 [i]	1.6	Oct. 31, 1912
Hospital for the Ruptured and Crippled [b]	Public and private	250	192 [d]	1,185 [e]	109 [j]	1.8	Sept. 30, 1912
New York Orthopædic Dispensary and Hospital	Private	70	62	462	40 [i]	1.6	Sept. 30, 1912
WASHINGTON							
Seattle							
Children's Orthopedic Hospital	Private	50	27	94	13	2.1	Feb. 1, 1913
Total		846	662 [d]	3,064	330	2.0	

[a] In all of the tables, statistics for each hospital are given for the most recent year for which information was available.

[b] Capacity refers to new plant, completed 1913, other figures to old plant.

[c] Including adults; average number of children, about 27.

[d] The average number of inmates for the New York Hospital for Deformities and Joint Diseases includes about 22 women, that for the New York Hospital for the Ruptured and Crippled about 20 women. The ratios of inmates to employes for these two institutions and for the group are probably not affected by this.

[e] Including 189 women.

[f] Administration work done by employes of St. Paul City and County Hospital not included. If included, it would probably reduce the ratio of children to employes to 4.0 or perhaps to 3.0.

[g] Not including laundress, part time.

[h] Not including clerk, laundress, and furnace man, part time.

[i] Not including 20 dispensary employes.

[j] Not including 33 dispensary employes.

[k] Figured on exact average, 10.4 inmates.

TABLE I B.—SOURCES OF SUPPORT, CAPACITY, CHILDREN IN CARE, AND EMPLOYES IN 14 CONVALESCENT HOSPITALS OR HOMES

Convalescent hospital or home	Sources of support	Beds for children	Average number of children in care during year	Children in care during year	Employes	Ratio of children to employes	Statistics for year ending [a]
ILLINOIS							
West Chicago							
Convalescent Home for Destitute Crippled Children	Private	60	40	60	17	2.4	July 10, 1912
MARYLAND							
Baltimore							
Children's Hospital School	Public and private	50	30	84[d]	16	1.9	Apr. 30, 1913
Kernan Hospital and Industrial School for Crippled Children	Public and private	55	53	190	38	1.4	June 1, 1912
MASSACHUSETTS							
Canton							
Massachusetts Hospital School	State	250	229	264	65	3.5	Nov. 30, 1912
MICHIGAN							
Detroit							
VanLeuven Browne Hospital School	Private	30	25	48	8	3.1	Mar. 31, 1913
MINNESOTA							
Phalen Park, St. Paul							
State Hospital and School for Crippled Children	State	60	38	69	12	3.2	Jan. 31, 1913
NEW YORK							
Coney Island							
Sea Breeze Hospital	Private	42	42	53	25	1.7	Sept. 30, 1912
Garden City							
House of St. Giles the Cripple	Public and private	85	45	80	13	3.5	Sept. 30, 1911
Port Jefferson							
St. Charles Hospital for Crippled Children[b]	Public and private	200[c]	110[c]	130[c]	18[e]	6.1[e]	Jan. 1, 1913
West Haverstraw							
State Hospital for Crippled Children	State	75	61	82	27	2.3	Sept. 30, 1912
White Plains							
Country Branch New York Orthopædic Hospital	Private	130	104	132	57	1.8	Sept. 30, 1912
PENNSYLVANIA							
Philadelphia							
Widener Memorial School	Private	100	96	96	78	1.2	July 29, 1912
Pittsburgh							
Industrial Home for Crippled Children	Public and private	50	45	50	16	2.8	Apr. 30, 1911
Sewickley							
Sewickley Fresh Air Home	Private	32	27	53	10	2.7	Dec. 1, 1911
Total		1,219	945	1,391	400	2.4	

[a] In all of the tables, statistics for each convalescent hospital or home are given for the most recent year for which information was available.

[b] Department of Brooklyn Home for Blind, Crippled, and Defective Children.

[c] Figures refer to cripples only.

[d] Not including seven readmissions.

[e] Includes only employes who devote most of their time to cripples. If all work for cripples were included, the ratio of children to employes would probably be 4.0 or 5.0.

TABLE 1 C.—SOURCES OF SUPPORT, CAPACITY, CHILDREN IN CARE, AND EMPLOYES IN 13 ASYLUM HOMES

Asylum home	Sources of support	Beds for children	Average number of children in care during year	Children in care during year	Employes	Ratio of children to employes	Statistics for year ending [a]
CONNECTICUT							
Newington							
Virginia T. Smith Home for Incurables	Public and private	100	87	115	28	3.1	Oct. 1, 1911
ILLINOIS							
Chicago							
Happy Haven	Private (South Side Crippled Children's Aid Society)	6	6	6	1 [d]	6.0	
Maywood							
Home for Disabled Children	Private (National Children's Home Society)	12	11	11	4 [e]	2.8	June 15, 1912
MASSACHUSETTS							
Hyde Park							
New England Peabody Home for Crippled Children	Private	30	30	38	14	2.1	Oct. 1, 1910
NEW JERSEY							
Englewood							
Daisy Fields Home and Hospital for Crippled Children	Private	18	18	23	5 [f]	3.6	Apr. 1, 1913
NEW YORK							
Buffalo							
Crippled Children's Home	Public and private	35	22	36	4	5.5	Oct. 1, 1912
New York City							
Darrach Home	Private	20	18	22	5	3.6	Jan. 1, 1911
House of the Annunciation for Crippled and Incurable Children	Private	30	30	31	10	3.0	Sept. 30, 1911
New York Home for Destitute Crippled Children [b]	Private	25	20 [c]	22 [c]	5 [g]	4.0	Oct. 16, 1912
OHIO							
Cleveland							
Holy Cross House	Private	20	18	28	7	2.6	Sept. 1, 1911

N. B. For footnotes see page 111.

TABLE I C.—SOURCES OF SUPPORT, CAPACITY, CHILDREN IN CARE, AND EMPLOYES IN 13 ASYLUM HOMES—(*Continued*)

Asylum home	Sources of support	Beds for children	Average number of children in care during year	Children in care during year	Employes	Ratio of children to employes	Statistics for year ending
PENNSYLVANIA							
Philadelphia							
Children's House of the Home for Incurables	Private	33	26	32	13	2.0	Apr. 15, 1911
Home of the Merciful Saviour for Crippled Children	Private	50	50	45	15	3.3	Oct. 31, 1911
House of St. Michael and All Angels	Private (Episcopal Sisters of St. Margaret)	30	25	37	6 [h]	4.2	Sept. 1, 1912
Total		409	361	446	117	3.1	

[a] In all of the tables, statistics for each asylum home are given for the most recent year for which information was available.
[b] Institution closed since this study was made.
[c] Estimated.
[d] Home conducted by one volunteer worker; occasional outside help.
[e] Not including man and laundress, part time.
[f] Not including seamstress, gardener, and furnace man, part time.
[g] Not including laundress, part time.
[h] Not including two laundresses and furnace man, part time.

TABLE II A.—FLOOR SPACE PER CHILD IN 9 HOSPITALS[a]

	Illinois Chicago, Home for Destitute Crippled Children	Maine Portland, Children's Hospital	Nebraska Lincoln, Nebraska Orthopedic Hospital	New Jersey Newark, Home for Crippled Children	New Jersey Orange, New Jersey Orthopaedic Hospital and Dispensary	New York New York City, Hospital for Deformities and Joint Diseases	New York New York City, Hospital for the Ruptured and Crippled[b]	New York New York City, New York Orthopædic Dispensary and Hospital	Washington Seattle, Children's Orthopedic Hospital	Total
Beds for children	112	65	100	56	16	57	250	70	50	776
Square Feet of Floor Space, Per Bed										
For children										
Indoor										
Day and play rooms	6	..	5	..	..[h]	..	6	..[l]	..	4
Dormitories and wards	44	80	39	52	62	52	54	64	63	54
School rooms—general	..	..	14[f]	..	..	..	16	11[l]	..	8
School rooms—industrial	..	..	..	..	..	..	..	..	..	..
Dining rooms	..	..	7	..	11[h]	..	14	9	..	6
Baths and toilets	7	5	9	9	6	5	15	5	12	10
Clothes rooms	..	..	7	3	2	1	3	4	3	3
Isolation rooms	18	12	..	..	9	..	13	13[m]	..	9
Total	75	97	81	64	90	58	121	106	78	94
Outdoor										
Day and play rooms	..	60	..	..	..	..	20[l]	6[m]	..	12
Dormitories and wards	13[d]	..	10	..	..	13[i]	..	..	22	5
School rooms	..	..	..	..	..	..	..	..	..	..
Total	13	60	10	..[g]	..	13	20	6	22	17
Total for children	88	157	91	64	90	71	141	112	100	111

For employes										
Sitting rooms	8	..	..	..	19	..	6	12	..	4
Dining rooms	4	10	9	5	..	..	6	5	10	6
Bed rooms	37	35	58	32	61	40	32	48	18	38
Baths and toilets	5	14	7	..	4	3	9	6	3	7
Total for employes	54	59	74	37	84	43	53	71	31	55
For general purposes										
Offices and reception rooms	9	9	10	7	..	9	11	10	6	9
Kitchens	4	8	6	8	14	9	7	5	14	7
Laundries	7	13	15	11	31	6	13	11	13	12
Store rooms	6	47	13	8	47	13	28	12	14	20
Halls	32	87	55	32	54	27	83	29	61	58
Porches [e]	3	..	..	20	..	..	11 [k]	..	..	6
Miscellaneous	..	..	2	1	..	..	3	..	..	1
Total for general purposes	61	164	101	87	146	64	156	67	108	113
For special purposes										
Medical and surgical rooms	12 [e]	43 [e]	15	8 [e]	19 [e]	10 [e]	25 [e]	16 [e]	27 [e]	20 [e]
Gymnasium—corrective	13	18	..	..	..	8	5	10	..	7
Brace shop	7	20	2	..	..	..	9	22	..	8
Total for special purposes	32	81	17	8	19	18	39	48	27	35
Total for all purposes	235	461	283	196	339	196	389 [b]	298	266	314
Beds for employes	29	33	34	14	4	24	70	31	12	251
Square feet of floor space, for employes' use, per employe	207	117	219	146	335	103	188	160	128	170

[a] Data are presented for nine of the ten hospitals. The Minnesota State Hospital is not comparable as to floor space with the other institutions in the group, as it is operated as a part of the St. Paul City and County Hospital and the employes live outside the department for cripples.

[b] Figures refer to new building.

[c] An equal amount of space not in use.

[d] Used also for industrial teaching.

[e] Dining room serves also as diet kitchen and play room.

[f] Including wards for adults, 13 square feet per bed.

[g] School rooms, equipped and used as play rooms.

[h] See, also, outdoor space for children.

[i] Not including estimated proportion of medical and surgical space for dispensary patients. (See Table IX.)

[j] Roof garden over entire building not used because of defects.

[k] Fire-escape balconies used for outdoor sleeping.

[l] Not including uncovered roof space—26 square feet per bed.

[m] Isolation rooms include outdoor day rooms—6 square feet per bed.

TABLE II B.—FLOOR SPACE PER CHILD IN 12 CONVALESCENT HOSPITALS OR HOMES[a]

	Illinois West Chicago, Convalescent Home for Destitute Crippled Children	Maryland Baltimore, Children's Hospital School	Maryland Baltimore, Kernan Hospital and Industrial School for Crippled Children	Massachusetts Canton, Massachusetts Hospital School[b]	Michigan Detroit, Van Leuven Browne Hospital School	Minnesota Phalen Park, St. Paul, State Hospital and School for Crippled Children	New York Garden City, House of St. Giles the Cripple	New York Port Jefferson, St. Charles Hospital for Crippled Children[c]	New York West Haverstraw, State Hospital for Crippled Children	New York White Plains, Country Branch, New York Orthopædic Hospital	Pennsylvania Pittsburgh, Industrial Home for Crippled Children	Pennsylvania Sewickley, Sewickley Fresh Air Home	Total
Beds for children	60	50	55	250	30	60	85	200	75	130	50	32	1,077
Square Feet of Floor Space, Per Bed													
For children													
Indoor													
Day and play rooms	13	..	..	12	21	..	5	..	..	23	12	15[n]	8
Dormitories and wards	24	..	34	44	36	60	35	28	19	77	60	38	40
School rooms—general	7	7	11[b]	24	8	8	20	8	14	18	12	..[n]	14
School rooms—industrial	..	..	..	..	..	8	..	2	7	41	21	..	7
Dining rooms	13	12	4	11	5	12	4	6	13	28	16	11	12
Baths and toilets	5	6	5	6	5	6	6	9	5	30	15	9	10
Clothes rooms	5	..[e]	1	1	2	..	2	..[i]	1	8	1	1	2
Isolation rooms	18	4	..	1	..	8	..[i]	2	10	9	53	5	7
Total	85	29	55	99	77	102	72	55	69	234	190	79	100
Outdoor													
Day and play rooms	..	9	..	..	..	..	2	4	..	55	..	31[o]	9
Dormitories and wards	13	39[f]	18	..	9	..	..	..[k]	26	..	27	..[p]	7
School rooms	..	..	..	..	..	..	..	..	..	..	..	27	1
Total	13	48	18	..	9	..	2	4	26	55	27	58	17
Total for children	98	77	73	99	86	102	74	59	95	289	217	137	117

For employes													
Sitting rooms	..	..	..	3	5	..	1	..	..	11	5	..	2
Dining rooms	4	3	7	3	..	..	3	1	8	6	6	3	4
Bed rooms	27	43	70	33	19	13	12	10	13	46	31	47 [q]	28
Baths and toilets	6	7	4	4	1	2	2	2	2	6	6	3	4
Total for employes	37	53	81	43	25	15	18	13 [l]	23	69	48	53	38
For general purposes													
Offices and reception rooms	14	12	21	5	13	3	5	1	4	9	3	9	6
Kitchens	5	10	12	8	9	7	5	4	12	12	21	5	8
Laundries	5	12	16	5	20	7	3	..	17	6	15	19	7
Store rooms	38	6	23	38	2	7	12	1	23	48	35	27	24
Halls	35	41	30	22	11	26	15	16	9	70	51	28	29
Porches [d]	17	17	34	28	4	..	17	5	18	7	5	21	15
Miscellaneous	2	7	..	1	..	..	4	4	3	..	4	..	3
Total for general purposes	116	105	136	107	59	50	61	31	86	152	134	109	92
For special purposes													
Medical and surgical rooms	3	11 [g]	9 [g]	4	3	3	2	3 [m]	9	16	3	3	6
Gymnasium—corrective	..	..	4	1	..	..	..	..	..	..	..	..	..
Brace shop	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for special purposes	3	11	13	5	3	3	2	3 [m]	9	16	3	3	6
Total for all purposes	254	246	303	254	173	170	155	106	213	526	402	302	253
Beds for employes	15	13	36	60	8	11	13	11	18	47	15	9	256
Square feet of floor space, for employes' use, per employe	148	203	124	181	94	84	118	242	95	191	160	187	160

[a] Data are presented for 12 of the 14 convalescent hospitals or homes. The Widener Memorial School, Philadelphia, and Sea Breeze Hospital, Coney Island, New York, are not comparable as to floor space, with other institutions in the group. (See Chapter VI, pp. 183 and 167.)

[b] An assembly hall and a boys' cottage erected since this study was made are not included either in the figures for capacity or in the figures for floor space.

[c] Department of Brooklyn Home for Blind, Crippled, and Defective Children.

[d] See, also, outdoor space for children.

[e] Lockers in dressing rooms attached to outdoor sleeping porches.

[f] Including indoor dressing room space, 9 square feet per bed.

[g] Not including estimated proportion of medical and surgical space used for dispensary patients. (See Table IX.)

[h] Used also for industrial teaching.

[i] In emergency surgical building could be used.

[j] Dormitories contain lockers.

[k] Since this study was made, a part of the roof space has been fitted up for outdoor sleeping for 28 children.

[l] Not including space occupied by six employes who sleep in dormitories for children.

[m] Since this study was made, the space for medical and surgical purposes has been practically doubled by converting all but one of sleeping rooms for employes into medical and surgical rooms. Sisters now sleep in another building.

[n] Play and school room combined.

[o] Covered pavilions and porches.

[p] Porches, 15 square feet per bed, used for sleeping in summer, included in play space.

[q] Including only that portion of attic space estimated to be actually used by employes. Additional attic space 31 square feet per bed.

TABLE II C.—FLOOR SPACE PER CHILD IN 12 ASYLUM HOMES[a]

	Connecticut Newington, Virginia T. Smith Home for Incurables	Illinois Chicago, Happy Haven	Illinois Maywood, Home for Disabled Children	Massachusetts Hyde Park, New England Peabody Home for Crippled Children	New Jersey Englewood, Daisy Fields Home and Hospital for Crippled Children	New York Buffalo, Crippled Children's Home	New York New York City, Darrach Home	New York New York City, New York Home for Destitute Crippled Children[b]	Ohio Cleveland, Holy Cross House	Pennsylvania Philadelphia, Children's House of the Home for Incurables	Pennsylvania Philadelphia, Home of the Merciful Saviour for Crippled Children	Pennsylvania Philadelphia, House of St. Michael and All Angels	Total
Beds for children	100	6	12	30	18	35	20	25	20	33	50	30	379
Square Feet of Floor Space, Per Bed													
For children													
Indoor													
Day and play rooms	13	81[d]	..	11	..	7	28	17	12	27	54	..[l]	19
Dormitories and wards	54	45	45	41	55	40	60	45	63	71	56	56	54
School rooms—general	22	..[e]	76[g]	19	19	..	..	..	24	14	29	..[e]	17
School rooms—industrial	9	..	..	22	..	..	..	..	7	..	..	..	4
Dining rooms	12	..[f]	21	26	18	7	20	13	13	14	29	12[l]	15
Baths and toilets	7	6	14	12	13	3	7	5	11	16	14	4	9
Clothes rooms	6	29	3	6	9	4	3	12	3	8	3	1	6
Isolation rooms	24	..	..	17	14	..	9[j]	5	..	..	47	5	16
Total	147	161	159	154	128	61	127	97	133	150	232	78	140
Outdoor													
Day and play rooms	1	..	8	28[h]	..	1	27[k]	..	11	..	..	9[h]	5
Dormitories and wards	5	..	..	47[i]	..	..	..	..	..	..	..	..	5
School rooms	..	..	..	9	..	..	..	..	..	..	..	..	1
Total	6	..	8	84	..	1	27	..	11	..	..	9	11
Total for children	153	161	167	238	128	62	154	97	144	150	232	87	151

For employes													
Sitting rooms	2	..	..	6	..	..	..	..	..	..	..	..	1
Dining rooms	4	..	..	..	28	..	..	..	..	..	4	12	4
Bedrooms	30	.. [d]	41	46	39	17	22 [j]	22	30	56	48	30	34
Baths and toilets	3	..	..	4	4	..	..	1	..	9	1	..	2
Total for employes	39	..	41	56	71	17	22	23	30	65	53	42	41
For general purposes													
Offices and reception rooms	6	..	16	8	15	15	20	30	22	9	17	8	12
Kitchens	8	40 [f]	20	11	13	3	25	10	6	15	14	6	11
Laundries	15	..	20	11	9	11	..	4	13	8	20	18	13
Store rooms	25	6	15	19	16	22	15	11	49	58	36	7	26
Halls	43	19	37	64	71	20	55	39	35	141	73	8	53
Porches [e]	22	37	67	19	25	..	..	..	..	24	1	14 [m]	15
Miscellaneous	..	..	..	8	..	..	..	..	..	..	13	8	3
Total for general purposes	119	102	175	140	149	71	115	94	125	255	174	69	133
For special purposes													
Medical and surgical rooms	..	..	..	9	4	7	..	..	18	2	5	..	3
Gymnasium—corrective	..	..	..	..	..	..	..	..	10	..	..	..	1
Brace shop	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for special purposes	..	..	..	9	4	7	..	..	28	2	5	..	4
Total for all purposes	311	263	383	443	352	157	291	214	327	472	464	198	329
Beds for employes	22	1	4	10	5	4	4	4	7	11	15	6	93
Square feet of floor space, for employes' use, per employe	180	..	120	166	255	154	110	144	86	194	177	208	168

[a] Data are presented for 12 of the 13 asylum homes. The House of the Annunciation, New York City, is part of the Mother House of the Sisters of the Annunciation, and the floor space for cripples can not be separately determined.
[b] Institution closed since this study was made.
[c] See, also, outdoor space for children.
[d] Day room serves also as employes' sleeping room.
[e] Children go out to school.
[f] Dining room and kitchen combined.
[g] Used also as play room.
[h] Covered play pavilion.
[i] Including indoor dressing-room space, 17 square feet per bed.
[j] Isolation room used as employes' bedroom when not needed for isolation purposes.
[k] Roof playground.
[l] Dining room and study combined.
[m] Estimated.

TABLE III A.—COST OF PLANT PER CAPITA IN 7 HOSPITALS[a]

Hospital	Beds for children	Total cost of plant	Per capita cost[b] for					Total per capita cost[b]
			Land	Buildings (including heating apparatus and machinery)	Surgical and gymnastic equipment	Furniture and educational equipment	Miscellaneous items	
ILLINOIS								
Chicago								
Home for Destitute Crippled Children	112	$103,000	$268[d]	$594	$13	$45	..	$920
MAINE								
Portland								
Children's Hospital	65	121,000	205	1,410	76	123	$48	1,862
NEBRASKA								
Lincoln								
Nebraska Orthopedic Hospital	100	94,000	120	660	45	115	..	940
NEW JERSEY								
Newark								
Home for Crippled Children	56	63,700	191	866	54	27	..	1,138
NEW YORK								
New York City								
Hospital for Deformities and Joint Diseases	57	104,500	281	1,425[e]	92	35	..	1,833
Hospital for the Ruptured and Crippled	250	1,297,600[c]	1,296	3,732	44	97	21	5,190
WASHINGTON								
Seattle								
Children's Orthopedic Hospital	50	111,600	400	1,610	60	162	..	2,232
Total	690	$1,895,400	$617	$1,982	$49	$87	$12	$2,747

[a] Data as to cost of plant are presented for seven of the 10 hospitals. The Minnesota State Hospital is operated as part of the St. Paul City and County Hospital to which the state pays a fixed sum for each child, in addition to the salary of a teacher, and furnishes the educational and medical supplies. (See Chapter VI, p. 145.) The New Jersey Orthopaedic Hospital and Dispensary occupies a rented plant. (See Chapter VI, p. 148.) The plant of the New York Orthopædic Dispensary and Hospital is too old for figures of cost to have significance. (See Chapter VI, p. 156.)

[b] Based on number of beds for children.

[c] Figures refer to new building.

[d] Including original building which is used for hospital purposes.

[e] Including alterations, costing $312 per capita.

TABLE III B.—COST OF PLANT PER CAPITA IN 12 CONVALESCENT HOSPITALS OR HOMES[a]

Convalescent hospital or home	Beds for children	Total cost of plant	Per capita cost[b] for					Total per capita cost[b]
			Land	Buildings (including heating apparatus and machinery)	Surgical and gymnastic equipment	Furniture and educational equipment	Miscellaneous items	
ILLINOIS								
West Chicago								
Convalescent Home for Destitute Crippled Children	60	$108,000	$196	$1,287	$33[g]	$217	$67[i]	$1,800
MARYLAND								
Baltimore								
Children's Hospital School	50	72,350	360	1,000	50	37[h]	..	1,447
Kernan Hospital and Industrial School for Crippled Children	55	84,250	..	1,473[f]	18	41	..	1,532
MASSACHUSETTS								
Canton								
Massachusetts Hospital School	250	276,200	68	904	14	77	42	1,105[j]
MICHIGAN								
Detroit								
Van Leuven Browne Hospital School	30	10,400	..	275[f]	..	72	..	347
MINNESOTA								
Phalen Park, St. Paul								
State Hospital and School for Crippled Children	60	68,100	191[d]	850	9	75	10	1,135
NEW YORK								
Garden City								
House of St. Giles the Cripple	85	25,700	121[e]	126	7	48	..	302
Port Jefferson								
St. Charles Hospital for Crippled Children	200	118,700[e]	53	507	5	25	4	594
West Haverstraw								
State Hospital for Crippled Children	75	77,600	267	564	41	132	31	1,035
White Plains								
Country Branch New York Orthopædic Hospital	130	420,200	98	2,780	29	325	..	3,232
PENNSYLVANIA								
Pittsburgh								
Industrial Home for Crippled Children	50	110,100	670	1,372	20	140	..	2,202
Sewickley								
Sewickley Fresh Air Home	32	21,700	156	469	3	44	6	678
Total	1,077	$1,393,300	$140	$1,015	$18	$104	$17	$1,294

[a] Data as to cost of plant are presented for 12 of the 14 convalescent hospitals or homes. The Widener Memorial School, Philadelphia, is not comparable with other institutions in the group. (See Chapter VI, p. 181.) Sea Breeze Hospital is a part of the institution known as Sea Breeze, and cost of plant can not be accurately determined. (See Chapter VI, p. 167.)

[b] Based on number of beds for children. [c] Department of the Brooklyn Home for Blind, Crippled, and Defective Children; figures relate only to department for cripples; expenses pro rata for department of cripples, based on statement for the entire institution. [d] Land donated.

[e] Including original building. [f] Including land. [g] Including reclining and wheel chairs. [h] Not including furniture donated.

[i] Including live stock and farm equipment. [j] Not including consumable supplies worth $36 per capita.

TABLE III C.—COST OF PLANT PER CAPITA IN 11 ASYLUM HOMES[a]

Asylum home	Beds for children	Total cost of plant	Per capita cost[b] for					Total per capita cost[b]
			Land	Buildings (including heating apparatus and machinery)	Surgical and gymnastic equipment	Furniture and educational equipment	Miscellaneous items	
CONNECTICUT								
Newington								
Virginia T. Smith Home for Incurables	100	$56,400	$61	$435	$2	$31	$35	$564
ILLINOIS								
Maywood								
Home for Disabled Children	12	11,400	514	430	..	6	..	950
MASSACHUSETTS								
Hyde Park								
New England Peabody Home for Crippled Children	30	36,600	205[c]	878	20	117	..	1,220
NEW JERSEY								
Englewood								
Daisy Fields Home and Hospital for Crippled Children	18	14,700	..[f]	734[g]	8	75	..	817
NEW YORK								
Buffalo								
Crippled Children's Home	35	21,100	314	228	..	61	..	603
New York City								
Darrach Home[c]	20	30,500	..[f]	1,475[g]	..	50	..	1,525
New York Home for Destitute Crippled Children[c d]	25	21,500	..[f]	820[g]	..	40	..	860
OHIO								
Cleveland								
Holy Cross House	20	11,600	..[f]	500[g]	28	52[i]	..	580
PENNSYLVANIA								
Philadelphia								
Children's House of the Home for Incurables	33	90,400	..	2,669[h]	..	70	..	2,739
Home of the Merciful Saviour for Crippled Children[c]	50	96,800	480	1,360	30	66[i]	..	1,936
House of St. Michael and All Angels	30	13,600	83	317	..	53	..	453
Total	373	$404,600	$150	$863	$8	$55	$9	$1,085

[a] Data as to cost of plant are presented for 11 of the 13 asylum homes. Happy Haven, Chicago, Illinois, is an individual philanthropy conducted by Miss Prouty in her private apartment and is not comparable with other institutions in the group. (See Chapter VI, p. 187.) The House of the Annunciation for Crippled and Incurable Children, because of the extraordinary value of its land, is not fairly comparable with the other institutions of the group.

[b] Based on number of beds for children.

[c] Has summer home which is excluded from the figures for cost of plant, in order that institution may be comparable with other institutions in the group.

[d] Institution closed since the study was made.

[e] Not including small amount of land donated.

[f] Included under buildings.

[g] Including land.

[h] Children's department located on grounds of institution for adults.

[i] Estimated.

TABLE IV A.—ANNUAL CURRENT EXPENSE PER CAPITA IN 9 HOSPITALS[a]

Hospital	Average number of children in care during year	Total current expense for year	Per capita cost[b] for							Total per capita cost[b]
			Salaries and wages	Provisions	Fuel and light	Clothing and bedding	Repairs	Medical and surgical supplies	Miscellaneous items	
ILLINOIS										
Chicago										
Home for Destitute Crippled Children[c]	87	$24,380	$138	$50	$30	$10	$5	$20	$27	$280
MAINE										
Portland										
Children's Hospital	57	26,420	161	121	60[i]	..	18[j]	34	69	464
NEBRASKA										
Lincoln										
Nebraska Orthopedic Hospital	70	44,678	182	130	47	45	119	51	64	638
NEW JERSEY										
Newark										
Home for Crippled Children	45	10,470	81	51	21	..	21	28	31	233
Orange										
New Jersey Orthopaedic Hospital and Dispensary	10	9,300[f]	350	206	39	..	..	145	154[f]	894[f]
NEW YORK										
New York City										
Hospital for Deformities and Joint Diseases	49[d]	43,850	353	157	51	16	50	147	121	895
Hospital for the Ruptured and Crippled	192[e]	108,782[g]	245	113	54	17	19	48	71	567
New York Orthopædic Dispensary and Hospital	62	60,583	528	168[h]	70	..	61	117	33	977
WASHINGTON										
Seattle										
Children's Orthopedic Hospital	27	12,987	236	81	53	..	7	38	66	481
Total	599	$341,450	$241	$111	$49	$14	$35	$58	$62	$570

[a] Data are presented for nine of the 10 hospitals. The Minnesota State Hospital is operated as a part of the St. Paul City and County Hospital, to which the state pays a fixed sum for each child, in addition to the salary of a teacher, and furnishes the educational and medical supplies.

[b] Based on average number of children in care.

[c] The report of the institution gave salaries as $12,000; other expenses undistributed. The distribution of current expenses is estimated by the editor.

[d] Including adults; average number of children about 27.

[e] Including a few women.

[f] Including rent and building repairs, $110 per capita. Expense per capita is figured on exact average of children in care, 10.4.

[g] Figures given refer to old plant.

[h] Including house supplies.

[i] Including water and power.

[j] Including "hospital repairs and replacements," $14 per capita.

TABLE IV B.—ANNUAL CURRENT EXPENSE PER CAPITA IN 13 CONVALESCENT HOSPITALS OR HOMES[a]

Convalescent hospital or home	Average number of children in care during year	Total current expense for year	Per capita cost[b] for							Total per capita cost[b]
			Salaries and wages	Provisions	Fuel and light	Clothing and bedding	Repairs	Medical and surgical supplies	Miscellaneous items	
ILLINOIS										
West Chicago										
Convalescent Home for Destitute Crippled Children[c]	40	$13,200	$140	$75	$35	$15	$10	$15	$40	$330
MARYLAND										
Baltimore										
Children's Hospital School	30	10,394	88	134	35	16	13	21	39	346
Kernan Hospital and Industrial School for Crippled Children	53	28,200	197	104	52	..	5	46	128	532
MASSACHUSETTS										
Canton										
Massachusetts Hospital School	229	66,565	120	80[e]	24	8[f]	7	7	45[j]	291
MICHIGAN										
Detroit										
Van Leuven Browne Hospital School	25	3,836	69	44	18	..	9	9	4	153
MINNESOTA										
Phalen Park, St. Paul										
State Hospital and School for Crippled Children[d]	38	11,398	116	65	52	..[g]	..	5	62[k]	300
NEW YORK										
Coney Island										
Sea Breeze Hospital	42	21,425	234	176	43	5	9	8	35	510
Garden City										
House of St. Giles the Cripple	45	13,034	90	86	22	16	10	15	51	290
Port Jefferson										
St. Charles Hospital for Crippled Children	110	19,713	57	47	9	14	10	12	31	179[l]
West Haverstraw										
State Hospital for Crippled Children	61	24,504	178	97	25	3	2	38[i]	59	402
White Plains										
Country Branch New York Orthopædic Hospital	104	57,455	265	163	38	..	20	18	49	552

PENNSYLVANIA										
Pittsburgh										
Industrial Home for Crippled Children . .	45	15,003	128	86	22	19	25	17	36	333
Sewickley										
Sewickley Fresh Air Home	27	10,568	117	111	12	22	48 [h]	..	81	391
Total	849	$295,295	$141	$95	$28	$8	$11	$15	$50	$348

[a] Data are presented for 13 of the 14 convalescent hospitals or homes. The Widener Memorial School, Philadelphia, is not comparable with the other institutions in the group. (See Chapter VI, p. 181.)
[b] Based on average number of children in care.
[c] Distribution estimated by the editor.
[d] Figures pro-rated on basis of information for six months.
[e] Including ice.
[f] Clothing only.
[g] Bedding included in miscellaneous.
[h] Including improvements.
[i] Including braces.
[j] Including farm and grounds, $15 per capita.
[k] Including bedding.
[l] See note "c," Table III B.

TABLE IV C.—ANNUAL CURRENT EXPENSE PER CAPITA IN 12 ASYLUM HOMES[a]

Asylum home	Average number of children in care during year	Total current expense for year	Per capita cost[b] for							Total per capita cost[b]
			Salaries and wages	Provisions	Fuel and light	Clothing and bedding	Repairs	Medical and surgical supplies	Miscellaneous items	
CONNECTICUT										
Newington										
Virginia T. Smith Home for Incurables	87	$18,564	$74	$43	$20	$11	$18	..	$47	$213
ILLINOIS										
Maywood										
Home for Disabled Children	11	3,356	141	63	32	17	3	..	49	305
MASSACHUSETTS										
Hyde Park										
New England Peabody Home for Crippled Children	30	10,251	134	124	25	11	..	$14	33	342
NEW JERSEY										
Englewood										
Daisy Fields Home and Hospital for Crippled Children	18	7,759	184	125	27[e]	18	16	11	50	431
NEW YORK										
Buffalo										
Crippled Children's Home	22	4,049	65	58	17	9	5	15	15	184
New York City										
Darrach Home[c]	18	3,920	77	83	12	7	14	..	25	218
House of the Annunciation for Crippled and Incurable Children[c]	30	6,428	40	82	26	3	5	2	56	214
New York Home for Destitute Crippled Children[c d]	20	4,138	79[g]	75[g]	10[g]	2	24	..	17	207
OHIO										
Cleveland										
Holy Cross House	18	5,080	90	142	19	5	15	4	7	282
PENNSYLVANIA										
Philadelphia										
Children's House of the Home for Incurables	26	10,277	102	126	19[f]	21	111	..[f]	16	395
Home of the Merciful Saviour for Crippled Children[c]	50	16,312	113	92	26	26	18	13	38	326
House of St. Michael and All Angels	25	4,719	49	87	19	2	11	3	18	189
Total	355	$94,853	$90	$84	$21	$12	$21	$5	$34	$267

[a] Data are presented for 12 of the 13 asylum homes. Happy Haven, Chicago, Illinois, is an individual philanthropy conducted by Miss Prouty in her private apartment and is not comparable with other institutions in the group. (See Chapter VI, p. 187.)

[b] Based on average number of children in care.

[c] Has summer home, the current expenses of which are included, as the main institution is closed for the summer.

[d] Institution closed since this study was made.

[e] Including water and sewer.

[f] Fuel and medical and surgical supplies of the children's department not separated from the department for adults in the accounts of the institution.

[g] Estimated.

TABLE V.—SOURCES OF THE INCOME OF 35 INSTITUTIONS[a]

Institution	Per cent of income from					
	Public funds	Invested funds	Pay patients	Donations	Miscellaneous sources	All sources
HOSPITAL						
MAINE						
Portland						
Children's Hospital	33	3	14	50	..	100
MINNESOTA						
St. Paul						
State Hospital	100	..	..	..	..	100
NEBRASKA						
Lincoln						
Nebraska Orthopedic Hospital	99	..	..	1	..	100
NEW JERSEY						
Newark						
Home for Crippled Children	22	12	30	36	..	100
Orange						
New Jersey Orthopaedic Hospital and Dispensary	..	7	14	79	..	100
NEW YORK						
New York City						
Hospital for Deformities and Joint Diseases	18	..	30	52	..	100
Hospital for the Ruptured and Crippled	26	33	25	16	..	100
New York Orthopædic Dispensary and Hospital	..	41	14	45	..	100
WASHINGTON						
Seattle						
Children's Orthopedic Hospital	..	3	35	62	..	100
Total	33	18	18	31	..	100

[a] Data are presented for nine of the 10 hospitals, for all of the 14 convalescent hospitals or homes, and for 12 of the 13 asylum homes. The Home for Destitute Crippled Children, Chicago, was unable to furnish an itemized statement.

TABLE V.—SOURCES OF THE INCOME OF 35 INSTITUTIONS (*Continued*)[a]

Institution	Per cent of income from					
	Public funds	Invested funds	Pay patients	Donations	Miscellaneous sources	All sources
CONVALESCENT HOSPITAL OR HOME						
ILLINOIS						
West Chicago						
Convalescent Home for Destitute Crippled Children	..	51	2	47	..	100
MARYLAND						
Baltimore						
Children's Hospital School	27	1	14	58	..	100
Kernan Hospital and Industrial School for Crippled Children	27	1	14	58	..	100
MASSACHUSETTS						
Canton						
Massachusetts Hospital School	100	..	..	..	..	100
MICHIGAN						
Detroit						
Van Leuven Browne Hospital School	..	..	24	76	..	100
MINNESOTA						
Phalen Park, St. Paul						
State Hospital and School for Crippled Children	100	..	..	..	..	100
NEW YORK						
Coney Island						
Sea Breeze Hospital	..	36[d]	3	61[e]	..	100
Garden City						
House of St. Giles the Cripple	45	8	1	46	..	100
Port Jefferson						
St. Charles Hospital for Crippled Children[b]	76	..	3	20	1	100
West Haverstraw						
State Hospital for Crippled Children	100	..	..	..	..	100
White Plains						
Country Branch New York Orthopædic Hospital	..	87	7	6	..	100
PENNSYLVANIA						
Philadelphia						
Widener Memorial School	..	100	..	..	..	100
Pittsburgh						
Industrial Home for Crippled Children	39	20	8	32	1	100
Sewickley						
Sewickley Fresh Air Home	7	3	..	89	1	100
Totals	47	23	5	25	..	100

Asylum Home						
Connecticut						
Newington						
Virginia T. Smith Home for Incurables	75	2	10	13	..	100
Illinois						
Maywood						
Home for Disabled Children	..	..	4	78	18	100
Massachusetts						
Hyde Park						
New England Peabody Home for Crippled Children	..	29	1	45	25	100
New Jersey						
Englewood						
Daisy Fields Home and Hospital for Crippled Children	..	3	..	97	..	100
New York						
Buffalo						
Crippled Children's Home	41	..	2	57	..	100
New York City						
Darrach Home	..	..	5	95	..	100
House of the Annunciation for Crippled and Incurable Children	..	..	..	99	1	100
New York Home for Destitute Crippled Children[c]	..	50	3	47	..	100
Ohio						
Cleveland						
Holy Cross House	..	..	6	93	1	100
Pennsylvania						
Philadelphia						
Children's House of the Home for Incurables	..	44	..	40	16	100
Home of the Merciful Saviour for Crippled Children	..	62	..	38	..	100
House of St. Michael and All Angels	..	44	12	44	..	100
Total	14	21	3	56	6	100

[a] Data are presented for nine of the 10 hospitals, for all 14 convalescent hospitals or homes, and for 12 of the 13 asylum homes. The Home for Destitute Crippled Children, Chicago, was unable to furnish an itemized statement. The work of Happy Haven, Chicago, is carried on in her own apartment and financed by Miss Florence Prouty. Figures as to income are not available. Because of exceptional features of the Widener Memorial School, figures for that institution have been omitted in computing the percentages for the group. (See Chapter VI, p. 181.)

[b] Department of the Brooklyn Home for Blind, Crippled, and Defective Children; figures relate only to department for cripples; income pro rata for cripples based on statement for entire institution.

[c] Institution closed since this study was made.

[d] Interest on building fund.

[e] Fifty per cent of the total income from reserve fund of Association for Improving the Condition of the Poor.

TABLE VI A.—RULES OF ADMISSION

Hospital	Kinds of orthopedic cases taken and preferred	Physical and mental restrictions and preferences	Usual period of stay in institution
ILLINOIS			
Chicago			
Home for Destitute Crippled Children	All kinds	Feeble-mindedness, epilepsy, and lung tuberculosis excluded	Until dispensary care can be safely substituted
MAINE			
Portland			
Children's Hospital . . .	All kinds	None; cases of lung tuberculosis isolated	Until dispensary care can be safely substituted; average 97 days
MINNESOTA			
St. Paul			
State Hospital	All kinds	None	As long as benefited by hospital care; average one year
NEBRASKA			
Lincoln			
Nebraska Orthopedic Hospital	All kinds	None	As long as benefited by hospital care; average 250 days [a]
NEW JERSEY			
Newark			
Home for Crippled Children .	All kinds	Lung tuberculosis and feeble-minded cases not desired; sometimes taken	Transfer as soon as possible to dispensary; great demand for beds
Orange			
New Jersey Orthopaedic Hospital and Dispensary .	All kinds	Lung tuberculosis excluded	Until dispensary care can be safely substituted; average 3 months
NEW YORK			
New York City			
Hospital for Deformities and Joint Diseases . . .	All kinds	Lung tuberculosis excluded	Until dispensary care can be safely substituted; average 6 months
Hospital for the Ruptured and Crippled	All kinds	None	Until dispensary care can be safely substituted; average 65 days
New York Orthopædic Dispensary and Hospital .	All kinds	Lung tuberculosis excluded	Until dispensary care can be safely substituted; average 50 days
WASHINGTON			
Seattle			
Children's Orthopedic Hospital	All kinds	Lung tuberculosis excluded	Until dispensary care can be safely substituted; average 44 days

[a] Aim to develop educational work and keep children until self-supporting.
[b] Plan to start visiting nursing.
[c] Some exceptions.

After care and visitation	Ages received	Age limit for discharge	Sexes received	Color restriction	Financial terms	Geographical restrictions and preferences
Through dispensary only	2½ to 11 [c]	12 [c]	Both	None	Usually free; maximum charge $5 a week [c]	Intended for residents of Illinois. Rule not strictly followed
Through dispensary and systematic visits by one agent of Maine Children's Committee	Any under 21 [d]	No rule	Both	None	Medical service free; patients pay for braces; board often free; maximum charge $1 a day	In-patients must be residents of Maine. Out-patients no restrictions
None	Any under 16	No rule	Both	None	Free	Minnesota children only
None	2 to 18; a few adults	No rule	Both	None	Free	Must have been resident in Nebraska one year
Through dispensary only	All	No rule	Both	None	Usually free; a few pay $1 to $10 a week	None
Through dispensary and systematic visits by one nurse (half time)	Boys 1½ to 16; girls 1½ up	Boys 16; girls no rule	Both	None	Usually free; maximum charge $5 a week	Preference given to New Jersey children
Through dispensary only [b]	All	No rule	Both	None	Usually paid for by relatives or city; some free; some private cases	None
One social service worker recently engaged	4 up [c]	No rule	Both	None	About 60 per cent paid by city; 20 per cent free and 20 per cent pay	None
Through dispensary and staff of 5 visiting nurses	2 to 14 and adult women [c]	No rule	Both	None	94 per cent free; occasional payments $4–$7 a week	None
Through dispensary and visiting nurse	Any under 16	No rule	Both	None	Usually free; maximum charge $10 a week	None

[d] Charter permits taking of adults.
[c] All ages treated in dispensary.

TABLE VI B.—RULES OF ADMISSION AND DISCHARGE

Convalescent hospital or home	Kinds of orthopedic cases taken and preferred	Physical and mental restrictions and preferences	Usual period of stay in institution
ILLINOIS			
West Chicago Convalescent Home for Destitute Crippled Children	Curable cases; no bed patients at present	Backward children received, but none obviously feeble-minded; no lung tuberculosis	At least until cured
MARYLAND			
Baltimore Children's Hospital School	Cases likely to be cured or distinctly improved	Lung tuberculosis and feeble-mindedness excluded [c]	Until benefited as much as possible
Baltimore Kernan Hospital and Industrial School for Crippled Children	All kinds	Backward children received, but none obviously feeble-minded; no lung tuberculosis	Plan to keep until as much benefited as possible [e]
MASSACHUSETTS			
Canton Massachusetts Hospital School	All kinds	Feeble-minded and epileptic cases excluded	Until benefited as much as possible
MICHIGAN			
Detroit Van Leuven Browne Hospital School	All kinds [b]	None	As long as they need a home
MINNESOTA			
Phalen Park, St. Paul State Hospital and School for Crippled Children	All kinds	Lung tuberculosis and feeble-mindedness excluded	Until benefited as much as possible [f]
NEW YORK			
Coney Island Sea Breeze Hospital	Tuberculosis of bones and glands only. Preference to bone tuberculosis	Because of great demand seldom take feeble-minded or chronic cases	Until benefited as much as possible
Garden City House of St. Giles the Cripple	All kinds	Very few feeble-minded cases; no new ones will be taken	Until benefited as much as possible, or as long as they need a home
Port Jefferson St. Charles Hospital for Crippled Children [a]	All kinds	None [d]	Until benefited as much as possible, or as long as they need a home
West Haverstraw State Hospital for Crippled Children	All kinds	Feeble-minded cases not often taken	As long as in need of convalescent care
White Plains Country Branch New York Orthopædic Hospital	Curable cases; especially bone tuberculosis	Lung tuberculosis excluded	Until cured and probability of relapse is past
PENNSYLVANIA			
Philadelphia Widener Memorial School	Permanent cripples, yet not absolutely helpless	Accept only those likely to become partially self-supporting. No lung tuberculosis, feeble-minded or backward children	Until 18 to 21 for purpose of industrial training
Pittsburgh Industrial Home for Crippled Children	All kinds	Preference to those likely to profit by industrial training. No lung tuberculosis, no feeble-mindedness	At least until benefited as much as possible; occasionally longer for purposes of education
Sewickley Sewickley Fresh Air Home	All kinds	Children with lung tuberculosis or markedly feeble-minded or epileptic, excluded	Until benefited as much as possible

[a] Department of Brooklyn Home for Blind, Crippled, and Defective Children.
[b] Occasional non-orthopedic cases.
[c] Occasional exceptions as to feeble-minded.
[d] Feeble-minded children segregated.
[e] This policy is not fully carried out because of demand for beds.
[f] May decide to keep for industrial training when organized.
[g] Expect to employ visitor.
[h] Most institutions which have no formal system of after care keep in touch with many discharged children through correspondence and visits of the children to the institution.

IN 14 CONVALESCENT HOSPITALS OR HOMES

After care and visitation	Ages received	Age limit for discharge	Sexes received	Color restriction	Financial terms	Geographical restrictions and preferences
New institution; policy not definitely decided	4 to 14	No rule	Both	None	Free	Cases transferred from Home for Destitute Crippled Children, Chicago
None [g]	3 to 10	13	Both	White only	Usually free; maximum charge $7 a week	Preference given to Maryland children
Through dispensary and staff of 3 visiting nurses	Up to about 16	Undecided	Both	White only [p]	Usually free; maximum charge $14 a week	Preference given to Maryland children
None [h]	5 to 15	No rule	Both	None	State, cities or towns. Parents pay $4 a week if able	Must be residents of Massachusetts
None [h]	3 years up [i]	No rule	Both	White only	Usually free; maximum charge $5 a week	None
None [h]	5 to 17 [j]	Undecided	Both	None	Free	Minnesota children only
Visits by agents of the Association for Improving the Condition of the Poor	2 to 12	No rule	Both	None	Usually free	None
None [h]	Up to 16	.. [o]	Both	None	Usually paid for by city	None
Visits by agent of Catholic Orphan Asylum Society	No rule [k]	No rule	Both	No rule	City cases at $.40 a day, others free or payment small	Most children from Brooklyn; none from Manhattan; a few from other states
None [h]	4 to 16 [l]	No rule	Both	None	Free; parents furnish clothing if able	Must be resident of New York State one year
None; if necessary would be supervised by nurses of city branch [h]	3 years up [k]	No rule	Both	None	Usually free. A few pay something	None
Plan boarding home for discharged children who are partially self-supporting	4 to 10 [m]	21	Both	White only	Free	Preference first to residents of Philadelphia; second, Pennsylvania outside of Philadelphia; third, any other states
None [h]	3 to 12 [n]	No rule	Both	No rule; no colored children yet taken	Usually free; maximum charge $1 a day	Pennsylvania children only
None [h]	3 to 12 [i]	No rule	Both	White only	Free	No rule; so far, all but one from Pennsylvania

[i] Occasional exceptions.
[j] Occasionally under five.
[k] Probably would not take boys over 12 years.
[l] Occasionally receive children under four years.
[m] All children must be indentured to the institution until 21.
[n] Occasionally receive children over 12 years.
[o] If children remain after 16 they become "helpers" and may stay indefinitely.
[p] Colored children treated at city dispensary.

Asylum home	Kinds of orthopedic cases taken and preferred	Physical and mental restrictions and preferences	Usual period of stay in institution
CONNECTICUT			
Newington			
Virginia T. Smith Home for Incurables	All kinds	Lung tuberculosis excluded [c]	Until benefited as much as possible; longer if they need a home
ILLINOIS			
Chicago			
Happy Haven	No children unable to attend public school classes for cripples	Lung tuberculosis excluded	As long as they need a home
Maywood			
Home for Disabled Children	Cases not requiring surgical treatment	Feeble-minded, deaf and blind cases and those with lung tuberculosis, excluded	Until self-supporting or a good home is found
MASSACHUSETTS			
Hyde Park			
New England Peabody Home for Crippled Children	All kinds	Lung tuberculosis and feeble-mindedness excluded	Until benefited as much as possible; or until self-supporting if they have not good homes
NEW JERSEY			
Englewood			
Daisy Fields Home and Hospital for Crippled Children	Curable cases, able to walk	Lung tuberculosis and feeble-mindedness excluded	Until benefited as much as possible; longer if they need a home
NEW YORK			
Buffalo			
Crippled Children's Home	All kinds	Children with lung tuberculosis or markedly feeble-minded or epileptic excluded	Until benefited as much as possible; longer if they need a home
New York City			
Darrach Home	All except helpless cases [b]	Lung tuberculosis excluded	As long as they need a home
House of the Annunciation for Crippled and Incurable Children	All except meningitis; no long-time bed cases	Children with lung tuberculosis,[d] epilepsy, St. Vitus' dance or syphilis excluded	As long as they need a home
New York Home for Destitute Crippled Children [a]	Cases not requiring surgical care or nursing	Lung tuberculosis and feeble-mindedness excluded	Until age limit if they need a home
OHIO			
Cleveland			
Holy Cross House	All kinds	Children with lung tuberculosis, known to be feeble-minded, or requiring special diets, excluded	As long as they need a home [e]
PENNSYLVANIA			
Philadelphia			
Children's House of the Home for Incurables	All kinds of incurable cases	Children with lung tuberculosis or feeble-minded or epileptic excluded	Most cases permanent; transferred to adult department at various ages
Home of the Merciful Saviour for Crippled Children	All kinds	Lung tuberculosis and feeble-mindedness excluded	Girls as long as they need a home. Incurable boys transferred to institutions for adults at about 16
House of St. Michael and All Angels	All kinds	Lung tuberculosis and feeble-mindedness excluded	Boys must leave at 10. Aim to place girls at service at about 18

[a] Institution closed since this study was made.
[b] Some exceptions.
[c] Plan to take no feeble-minded cases.
[d] Possible exceptions in cases under four years, slightly affected.
[e] Do not plan to keep adult cases.

DISCHARGE IN 13 ASYLUM HOMES

After care and visitation	Ages received	Age limit for discharge	Sexes received	Color restriction	Financial terms	Geographic restrictions and preferences
By agents of Connecticut Children's Aid Society	2 years up [a]	No rule	Both	None	State pays $3 a week for one-half; a few free. Relatives or towns pay something for others, usually $1 a week	Connecticut children except in rare instances
None [f]	School age	No rule	Both	None	Usually free; 1 pays $4 a week	None
By agents of Children's Home Society	No infants. None over 8	No rule	Both	None	Usually free; parents may contribute to home	None
None [f]	To 12	No rule	Both	None	Usually free; maximum charge $3 a week	New England children
None [f]	3 to 10	Boys, 14, girls, no rule	Both	White only	Usually free; a few pay small amounts	None [j]
By members of a visiting committee, who also co-operate with other agencies	Up to about 16	No rule	Both	None	Usually free; per capita rate for county cases	None
None [f]	3 to 12 [b]	No rule	Both	White only	Usually free; a few pay a little	None
None [f]	4 to 16 [b]	No rule [i]	Girls only	White only	Free	None
None [f]	3 to 14	Usually 17	Both	White only	Free	None
None [f]	No rule	No rule	Both	White only	Usually free	Preference to Cleveland children; some from other cities and states
None [f]	Up to 12	No rule	Both	White only	Usually free; maximum charge $7 a week	First, Philadelphia, second, Pennsylvania, and third, other states
None [f]	2½ to 6	No rule	Both	White only	Usually free; a few pay small amounts	Preference to Pennsylvania children others taken
None [f]	2 years up	Boys, 10, girls, usually 18	Both	Colored only	Usually free; a few pay $1 a week	None

[f] Most institutions which have no formal system of after care keep in touch with many discharged children through correspondence and visits of the children to the institution.

[a] Adults not taken.

[b] Occasionally under four.

[i] Usually leave at 16.

[j] Receive mostly New York City children.

TABLE VII.—CHILDREN ATTENDING SCHOOL: GRADE, WORK. TEACHERS, SESSIONS, AND EQUIPMENT, IN 37 INSTITUTIONS

Institution	Children in classes						Teachers			School sessions			Seating equipment			
	In kindergarten and grades			In hand work and vocational training classes			For kindergarten and grades		For hand work and vocational training	Hours per day		Days per week	Desks and seats			Tables and chairs used
	In kindergarten	In grades	Total	In hand work and domestic science	In vocational training	Total	Supplied by institution	Supplied by city		A. M.	P. M.		Special	Adjustable as to height	Not adjustable as to height	
HOSPITAL																
ILLINOIS																
Chicago																
Home for Destitute Crippled Children [a]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MAINE																
Portland																
Children's Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MINNESOTA																
St. Paul																
State Hospital	..	29 [g]	29	..	..	..	1	..	..	2	2 [dd]	5 [ff]	..	..	22	..
NEBRASKA																
Lincoln																
Nebraska Orthopedic Hospital	20	70	90	24	13	37	2	..	2	2½	2¾	5	..	..	..	Yes
NEW JERSEY																
Newark																
Home for Crippled Children	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orange																
New Jersey Orthopaedic Hospital and Dispensary	6	5	11	..	..	..	1	..	..	3	..	5	..	..	..	Yes
NEW YORK																
New York City																
Hospital for Deformities and Joint Diseases	..	15	15	..	..	..	1 [r]	..	..	2½	..	2 or 3	..	..	..	..
Hospital for the Ruptured and Crippled	40	92	132	39 [t]	..	39	1	6 [u]	1 [v]	3	..	5	..	..	..	Yes
New York Orthopædic Dispensary and Hospital	..	15	15	..	..	..	1	..	..	..	3	4	..	..	..	Yes
WASHINGTON																
Seattle																
Children's Orthopedic Hospital	13	12	25	..	..	..	1	1	..	3	..	5	..	..	..	Yes

Convalescent Hospital or Home																
Illinois																
West Chicago																
Convalescent Home for Destitute Crippled Children	7	26	33	7	..[p]	7[q]	..	1	..	1¼–2	1–2	5	..	35	..	..
Maryland																
Baltimore																
Children's Hospital School	..	19	19	30[j]	..[p]	30	..	1	1[w]	3	..	5	10	10	..	..
Kernan Hospital and Industrial School for Crippled Children	1	16	17	12	..[p]	12	1	1	..	2½	..	5	..	24	..	..
Massachusetts																
Canton																
Massachusetts Hospital School	27	136	163	62	15	77	3	..	1	3	1¼	5	..	50	..	Yes
Michigan																
Detroit																
Van Leuven Browne Hospital School	..	10	10	..	..	..	1	..	..	3	2	5[ss]	..	..	..	Yes
Minnesota																
Phalen Park, St. Paul																
State Hospital and School for Crippled Children	..	38	38	42[k]	..[p]	42	1	..	1	3	1[dd]	5	..	..	..	Yes
New York																
Coney Island																
Sea Breeze Hospital	11	31	42	13[j]	..	13	..	2	..	3[y]	1	5	..	..	23	Yes
Garden City																
House of St. Giles the Cripple	14	46	60	8	1	9	2	..	..	3	2	5	..	..	21	..
Port Jefferson																
St. Charles Hospital for Crippled Children	..	82	82	3	7	10	3	..	1	3	2¼	5	..	..	62	..
West Haverstraw																
State Hospital for Crippled Children	..	46	46	45[l]	4	49	1	..	1	3[s]	2[oo]	5	..	..	16	..
White Plains																
Country Branch New York Orthopædic Hospital	..	97	97	40[m]	..	40	4	..	1	2¾[aa]	1½[aa]	5	..	116	..	..
Pennsylvania																
Philadelphia																
Widener Memorial School	4	92	96	36	19	55	2	..	3	..[bb]	..[bb]	5	40	57	..	..
Pittsburgh																
Industrial Home for Crippled Children	..	23[b]	23	11	9	20	1	..	1	3[oo]	2	5	..	21	..	..
Sewickley																
Sewickley Fresh Air Home	14	12	26	22[n]	..	22	1[s]	..	1[r]	2	1	5	..	..	..	Yes

[a] If children are able they go out to special public school classes for cripples.
[b] A few older children attend regular public school classes.
[j] Most of the work is of kindergarten grade.
[m] Not including 35 children doing elementary gardening.
[q] Not including 17 children taking daily gardening lessons in summer.
[u] Institution selects teacher, city pays per capita rate ($15 per year for each pupil) for maintenance of school.
[w] Furnished by Playground Association, Baltimore.
[x] For children below the fifth grade.
[bb] Hours vary for different grades; total for grades, 12 to 16 hours per week: for kindergarten about three and one-half hours per week.
[dd] Mornings only, in summer.
[ff] Five mornings and three afternoons; mornings only, in summer.
[i] Including 12 children between six and one-half and nine years doing hand work more advanced than kindergarten work.
[k] Including 22 doing hand work of kindergarten grade.
[n] Estimated.
[r] Volunteer.
[g] Includes some children doing work of kindergarten grade.
[l] Including 15 doing hand work of kindergarten grade.
[p] Vocational training planned.
[s] Nurse.
[v] Furnished by People's University Extension Society, New York.
[y] Kindergarten class two and one-half hours in morning only.
[aa] Some simple hand work has been taught by volunteer academic teacher outside of hours stated
[oo] For children in fifth to eighth grades inclusive.
[ss] "Public school hours"; two hours only in afternoon.

TABLE VII.—CHILDREN ATTENDING SCHOOL: BY GRADE, WORK. TEACHERS, SESSIONS, AND EQUIPMENT, IN 37 INSTITUTIONS (*Continued*)

Institution	Children in classes						Teachers			School sessions			Seating equipment			
	In kindergarten and grades			In hand work and vocational training classes			For kindergarten and grades		For hand work and vocational training	Hours per day		Days per week	Desks and seats			Tables and chairs used
	In kindergarten	In grades	Total	In hand work and domestic science	In vocational training	Total	Supplied by institution	Supplied by city		A. M.	P. M.		Special	Adjustable as to height	Not adjustable as to height	
ASYLUM HOME																
CONNECTICUT																
Newington																
Virginia T. Smith Home for Incurables	2	55	57	45	..	45	2	..	3 [x]	1½–3	1½–2¼	5	..	..	79	Yes
ILLINOIS																
Chicago																
Happy Haven [b]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Maywood																
Home for Disabled Children	2	4	6	..	..	..	1	..	..	2	1½	5	..	..	..	Yes
MASSACHUSETTS																
Hyde Park																
New England Peabody Home for Crippled Children	6	19	25	27	..	27	1	..	1	2¾	1½	5	..	24	..	..
NEW JERSEY																
Englewood																
Daisy Fields Home and Hospital for Crippled Children	..	17 [g]	17	..	..	..	1	..	..	3	..	5	..	..	..	Yes
NEW YORK																
Buffalo																
Crippled Children's Home [e]	..	..	..	17	..	17	..	..	..	..	..	..	..	..	..	..
New York City																
Darrach Home [d]	..	..	..	8	..	8	..	..	1 [v]	..	..	..	..	..	..	..
House of the Annunciation for Crippled and Incurable Children	..	27	27	27 [o]	..	27	1	..	1 [v]	1	..	5	..	..	..	Yes
New York Home for Destitute Crippled Children [e]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
OHIO																
Cleveland																
Holy Cross House	..	13	13	..	..	..	..	1	..	2–3	0–2	5	..	13	..	..
PENNSYLVANIA																
Philadelphia																
Children's House of the Home for Incurables	..	28 [g]	28	28	..	28	2	..	1	3	..	5	..	..	8	Yes
Home of the Merciful Saviour for Crippled Children	6	36	42	5	..	5	1 [t]	..	..	3	1½	5	..	..	28	..
House of St. Michael and All Angels [f]	..	..	..	..	6	6	..	..	..	..	..	..	..	..	..	..

[b] Children go out to special public school classes for cripples.
[c] Children go out to regular public school classes; hand work taught by volunteer teachers.
[d] Children go out to school, some to regular public school classes, others to special classes for cripples.
[e] Children go out to regular public school classes. Institution closed since this study was made.
[f] Most of the children go out to regular public school classes; two taught by one of the Sisters.
[g] Includes some children doing work of kindergarten grade.
[o] Class in simple hand work once a week.
[t] Not including one older girl who teaches in kindergarten class.
[v] Furnished by People's University Extension Society, New York.
[x] Including gardening teacher employed in spring and summer only.

TABLE VIII.—HAND WORK AND VOCATIONAL WORK IN 37 INSTITUTIONS

Institution	Hand work and vocational work
HOSPITAL	
ILLINOIS	
Chicago	
Home for Destitute Crippled Children	None
MAINE	
Portland	
Children's Hospital	None
MINNESOTA	
St. Paul	
State Hospital	None
NEBRASKA	
Lincoln	
Nebraska Orthopedic Hospital	Sewing, cooking, simple housework,[b] elementary bookbinding and repairing; cataloguing and general library work, printing, gardening
NEW JERSEY	
Newark	
Home for Crippled Children	None
Orange	
New Jersey Orthopaedic Hospital and Dispensary	None
NEW YORK	
New York City	
Hospital for Deformities and Joint Diseases	None
Hospital for the Ruptured and Crippled	Sewing, chair-caning (basketry in summer), elementary carpentry
New York Orthopædic Dispensary and Hospital	None
WASHINGTON	
Seattle	
Children's Orthopedic Hospital	None

[b] By simple housework is meant the ordinary domestic work of the house, not instruction by domestic science teachers.

TABLE VIII.—HAND WORK AND VOCATIONAL WORK IN 37 INSTITUTIONS—(CONTINUED)

Institution	Hand work and vocational work
CONVALESCENT HOSPITAL OR HOME	
ILLINOIS	
West Chicago	
Convalescent Home for Destitute Crippled Children	Sewing, simple housework,[b] gardening [c]
MARYLAND	
Baltimore	
Children's Hospital School	Advanced kindergarten work, basketry, chair-caning [d]
Kernan Hospital and Industrial School for Crippled Children	Sewing, lace making, rug weaving, basketry, chair-caning, burnt woodwork, stenography and typewriting
MASSACHUSETTS	
Canton	
Massachusetts Hospital School	Sewing, complete course in housekeeping, manual training, practical carpentry, printing, cobbling, farming, stationary engineering, music
MICHIGAN	
Detroit	
Van Leuven Browne Hospital School	None
MINNESOTA	
Phalen Park, St. Paul	
State Hospital and School for Crippled Children	Sewing, simple housework,[b] manual training, furniture making [d]
NEW YORK	
Coney Island	
Sea Breeze Hospital	Some sewing and basketry, advanced kindergarten work
Garden City	
House of St. Giles the Cripple	Sewing, simple housework [b]
Port Jefferson	
St. Charles Hospital for Crippled Children	Sewing, tailoring, stenography and typewriting
West Haverstraw	
State Hospital for Crippled Children	Sewing, stenciling and wood blocking, furniture making
White Plains	
Country Branch New York Orthopædic Hospital	Sewing, cooking, simple housework,[b] gardening
PENNSYLVANIA	
Philadelphia	
Widener Memorial School	Sewing, cooking, elementary nursing and general work in wards, basketry, stenciling, chair-caning, burnt woodwork, manual training, practical carpentry, engraving, cobbling, stationary engineering, teaching, music
Pittsburgh	
Industrial Home for Crippled Children	Sewing, basketry, manual training, furniture making, music
Sewickley	
Sewickley Fresh Air Home	Sewing, basketry, manual training, gardening

Asylum Home	
CONNECTICUT	
Newington	
The Virginia T. Smith Home for Incurables	Simple housework,[b] manual training, gardening, music
ILLINOIS	
Chicago	
Happy Haven	Simple housework [b]
Maywood	
Home for Disabled Children	Simple housework [b]
MASSACHUSETTS	
Hyde Park	
New England Peabody Home for Crippled Children	Sewing, cooking, simple housework,[b] basketry, chair-caning, manual training
NEW JERSEY	
Englewood	
Daisy Fields Home and Hospital for Crippled Children	Simple housework,[b] gardening
NEW YORK	
Buffalo	
Crippled Children's Home	Sewing, advanced kindergarten work
New York City	
Darrach Home	Sewing, simple housework [b]
House of the Annunciation for Crippled and Incurable Children	Sewing, basketry, advanced kindergarten work, music
New York Home for Destitute Crippled Children [a]	Sewing, simple housework[b]
OHIO	
Cleveland	
Holy Cross House	Simple housework [b]
PENNSYLVANIA	
Philadelphia	
Children's House of the Home for Incurables	Sewing, manual training
Home of the Merciful Saviour for Crippled Children	Sewing, simple housework [b]
House of St. Michael and All Angels	Sewing, complete course in housekeeping

[a] Institution closed since this study was made.
[b] By simple housework is meant the ordinary domestic work of the house, not instruction by domestic science teachers.
[c] Plan to teach all branches of housework and several branches of farmwork, including dairying.
[d] Plan to teach farm industries.

TABLE IX.—DISPENSARY WORK OF THE 9 INSTITUTIONS HAVING DISPENSARIES[a]

Institution[b]	Square feet of floor space used for dispensary purposes	Visits by out-patients in year[c]	Average daily attendance of out-patients	Number of different out-patients in year	Average number of visits by each out-patient in year	Dispensary open			Visits to homes of out-patients in year
						Days in year	Days per week	Hours per day	
ILLINOIS									
Chicago									
Home for Destitute Crippled Children	2,054	2,587	9[d]	710[d]	2.2[d]	304	6	2	None
MAINE									
Portland									
Children's Hospital	3,023	8,935	29	664	13.5	306	6	1½	[g]
MARYLAND									
Baltimore									
Kernan Hospital and Industrial School for Crippled Children	4,117	1,701	11	250[e]	7.0	150	3	3½	930
NEW JERSEY									
Newark									
Home for Crippled Children	1,237	2,797	28	538	5.2	101	2	2	None
Orange									
New Jersey Orthopaedic Hospital and Dispensary	1,200	1,784	17	399	4.5	103	2	2	1,137
NEW YORK									
New York City									
Hospital for Deformities and Joint Diseases	1,977	33,998	112	3,414	10.0	304	6	2	None
Hospital for the Ruptured and Crippled	10,165	44,604	147	22,000[f]	2.0[f]	304	6	2	None
New York Orthopædic Dispensary and Hospital	2,559	27,140	89	6,417	4.2	304	6	2	15,518[h]
WASHINGTON									
Seattle									
Children's Orthopedic Hospital	724	738	14	250	3.0	51	4	1 to 2	None

[a] Statistics are given for the most recent year for which information was available.
[b] Eight of the 10 hospitals and one of the 14 convalescent hospitals or homes have dispensaries.
[c] Including visits for massage and corrective gymnastics.
[d] Not including patients coming for massage and corrective gymnastics only.
[e] New cases.
[f] Estimated.
[g] Children's homes are visited by agents of Maine Children's Committee.
[h] Including 7,020 visits by surgeons and 8,498 visits by four visiting nurses and one social service worker.

Main Buildings

Roof Garden

CHILDREN'S HOSPITAL, Portland, Maine. (See page 142)

HOME FOR CRIPPLED CHILDREN, Newark, New Jersey. (See page 147)

CHAPTER VI

DETAILED DESCRIPTION OF INSTITUTIONS

A. HOSPITALS*

ILLINOIS

HOME FOR DESTITUTE CRIPPLED CHILDREN, 1653 Park Avenue, Chicago

Incorporated: 1892.

Superintendent: Miss M. O. Stewart.

Orthopedic surgeon: John Lincoln Porter, M.D.

Class: Hospital.

Average number of children: 87. Capacity: 112.

Plant: Brick buildings, not all fireproof. Iron fire-escapes with very wide platforms at window levels; children carried to windows during frequent fire drills.

Admission: Two and a half to eleven years; chiefly residents of Illinois. No feeble-minded or epileptic; no tuberculosis of the lungs.

Discharge: At twelve years, or after dispensary care can be safely substituted.

Facilities for care of children: Affiliation with Rush Medical College. Superintendent resident in the Home. Four graduate nurses, one of whom is head night nurse; nurses in training come from Presbyterian Hospital for periods of service here in order to secure training in orthopedic nursing. Full hospital equipment; operating room; special gymnasium; brace shop; separate isolation ward; sleeping facilities for 30 children, on roof enclosed in glass; large dispensary service.

School: None.

Hand work and vocational training: None.

Cost of property: $103,000.

Year's expenditure per capita: $280.

*The population statistics of some hospitals include a small number of adults. In the text, these are included in "average number of children"; in the tables the number of adults is given in footnotes.

Comment: The name is misleading. The work of the home is purely that of a hospital. Nearly all the children are bed cases and the average stay in the hospital is short. Convalescent cases are sent to the Convalescent Home for Destitute Crippled Children in West Chicago. This hospital, of good standing in the surgical world, is notable for its lack of modern business methods on certain points. The record of expenditures for each year is printed in the report according to the following method:

"January, Sundry Cash Items . . . .
February, Sundry Cash Items . . . .
March, Sundry Cash Items . . . ." and so forth.

It is possible to tell how much is spent during each month, but there is no statement as to how much of the money is spent specifically for salaries, for provisions, and for other important items. This is the only orthopedic hospital which prints no detailed financial statement.

MAINE

CHILDREN'S HOSPITAL, Portland

Date of opening: 1908.

Superintendent: Miss Edith Soule.

Orthopedic surgeon: Edville G. Abbott, M.D.

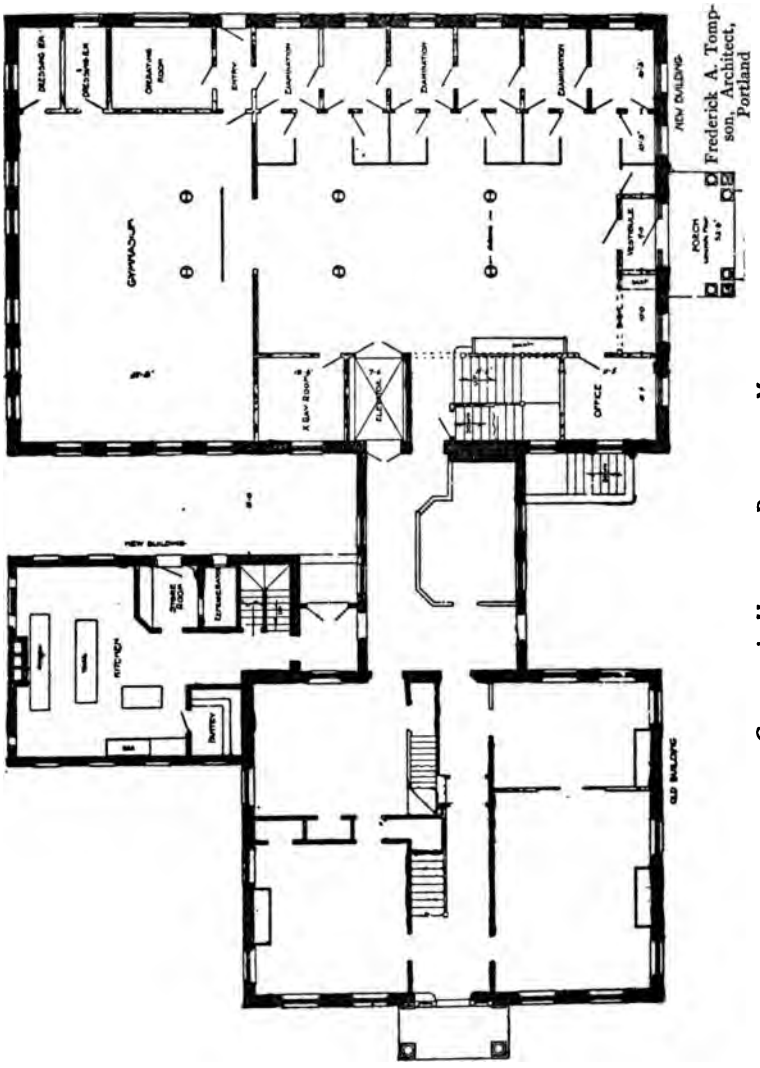
Class: Hospital.

Average number of children: 57. Capacity: 65.

Plant: Three city lots. Old mansion used by nurses; adjoining modern building, of similar architectural design, used for hospital. The latter is so nearly fireproof that no insurance is carried. Walls of brick, with steel lath inside; all floors of terrazzo; slate treads on stairs; fire doors to nurses' home and shutting off elevator shaft; other doors of wood and opaque glass. Second stairway; outside escape from isolation ward only. Stairs do not run around elevator. Painted walls.

Admission: Infants to twenty-one years; in-patients must be residents of Maine; cases with lung tuberculosis sometimes taken and isolated; feeble-minded are taken, all that is possible is done for their orthopedic difficulties, then they are sent to State Home for Feeble-minded. In emergencies only, a few infants who were not orthopedic cases have been taken.

Discharge: After dispensary care can be safely substituted; average stay 97 days.



CHILDREN'S HOSPITAL, PORTLAND, MAINE
First Floor Plan

Facilities for care of children: Medical staff includes orthopedic specialists; superintendent and superintendent of nurses are graduate nurses; 22 nurses in training, whose course includes two and one-half years in this hospital and six months at Bellevue Hospital in New York. Night nurse and engineer on duty all night. Full hospital equipment. All kinds of orthopedic operations performed. Well equipped gymnasium for special gymnastics. Isolation ward over kitchen, accessible only by outside iron stairs, includes two wards, nurses' room, bath, diet kitchen, serving room, store room. Brace shop in basement where work for the hospital is done; also private orders; brace makers work independently, not on salary. Large dispensary service daily. Excellent sun room on roof for use by day, surrounded by unenclosed promenade with green awnings. Thresholds absent; very large elevator. After care through agent of Maine Children's Committee.

School: None.

Hand work and vocational training: None.

Cost of property: $121,000.

Year's expenditure per capita: $464.

Comment: Well equipped modern building, has every facility for hospital care, including wards with many windows and outdoor space for use by day, though no outdoor sleeping space. Noteworthy arrangement of examination rooms in the dispensary for fullest use of surgeon's time; entrance into each examining room directly from waiting room, also door from examining room to a dressing room, and exit thence directly to waiting room. Most cases are bed patients whose stay is relatively short; no need is felt for a dining room or other general space for patients except the sun room and promenade on the roof. The atmosphere of the institution is very cheerful and friendly. About one-third of the expenses are paid from the State treasury.

MINNESOTA

State Hospital for Indigent Crippled and Deformed Children, St. Paul

(Maintained by the state of Minnesota)

Date of opening: 1897.

Superintendent: None. (Superintendent of St. Paul City and County Hospital, Arthur B. Ancker, M.D.)

Orthopedic surgeon: Arthur J. Gillette, M.D.

Class: Hospital.

Average number of children: 63. Capacity: 70.

Plant: Brick building, part of St. Paul City and County Hospital. Two stairways; painted walls; floors of bare wood.

Admission: Up to sixteen years; Minnesota children only; no restrictions as to kinds of cases.

Discharge: After they no longer need strictly hospital care; usually when able to be cared for equally well at country branch at Phalen Park. Average stay before opening of country branch, about one year.

Facilities for care of children: Special medical staff, including orthopedic specialists; also the facilities of a large general hospital as to its operating rooms, wards for isolation of contagious diseases; resident physicians, interne, and nurses. Graduate head nurse works only with crippled children. Each interne spends with them one month of his year's residence; nurses in training remain from six weeks to two months each. Tent in yard for outdoor sleeping in summer. Outdoor playground with swings. Night nurse (in training). Thresholds absent.

School: Non-resident teacher; graded school. Non-adjustable desks and seats. Bedside teaching also.

Hand work and vocational training: None.

Cost of property: No property owned; cases cared for in one building of St. Paul City and County Hospital used for orthopedic cases.

Year's expenditure per capita: $221.*

Comment: The children come here for operations and post-operative care. If there is room at the country branch in Phalen Park they are sent there for convalescence and further education, including industrial training. At the city hospital the care of the crippled children is of the same high standard as the whole work of the hospital. The building is not new but serves its purpose well, and the playground and tent for sleeping out of doors are important features. High grade of nurses and other employes may be more easily possible because of connection with the city hospital. The atmosphere is cheerful and the children seem very happy. The institution stands high in public favor through the state.

*Low rate is due to the fact that children are cared for under contract by the St. Paul City and County Hospital at a rate which is less than actual cost in the state hospital and school for the same children at Phalen Park.

NEBRASKA

NEBRASKA ORTHOPEDIC HOSPITAL, Lincoln
(Maintained by the state of Nebraska)

Date of opening: 1905.
Superintendent: H. Winnett Orr, M.D.
Orthopedic surgeon: J. P. Lord, M.D.
Class: Hospital, with educational facilities.
Average number of children: 70. Capacity: 100.
Plant: City lots with large outdoor play space. Two large brick buildings, not new, also laundry building. Much wood in interior of buildings; fire would spread rapidly. Painted walls, bare floors of wood. Provisions for escape are fair; spiral enclosed fire-escape; fire drills.
Admission: From two to eighteen years; must be residents of Nebraska. No restriction as to kinds of cases.
Discharge: After hospital care is no longer needed; plan to emphasize educational work and occupational training and to keep many children until they have learned to support themselves. Average stay of first 500 patients, 250 days.
Facilities for care of children: Operating suites and X-ray machine. Visiting surgeon-in-chief and assistant surgeon are orthopedic specialists. Assistant surgeon is also superintendent and resides in institution. Head nurse and assistant are graduate nurses; training school with two years' course has 11 pupil nurses; all high school graduates. Masseuse, night watchman, two night nurses. Special ward used by older girls could serve for isolation. Elevator enclosed; thresholds absent; two inclines; solarium ward furnishes practically outdoor sleeping for limited number.
School: Graded school with two experienced teachers. Tables and chairs used. School is open twelve months in the year.
Hand work and vocational training: Sewing, cooking, simple housework, elementary bookbinding and repairing, cataloguing and general library work, printing, gardening. Specially trained teacher of domestic science (resident); special non-resident teacher of bookbinding and printing.
Cost of property: $94,000.
Year's expenditure per capita: $638.
Comment: This hospital is doing work on a comprehensive scale, covering operations and convalescent care. Educational work, including occupational training, receives more emphasis than in any of the other institutions we have classed as hospitals. All

this work is carried on by a staff of employes whose enthusiasm seems unlimited, and with thoroughly creditable results, in spite of the serious handicap presented by out-of-date buildings. The risk of fire is considerable. The institution merits a modern plant, which should include a small separate cottage for isolation of contagious diseases, and, if possible, two small cottages, one for the older boys and one for the older girls.

NEW JERSEY

HOME FOR CRIPPLED CHILDREN, Clinton and Fifth Avenues, Newark

Date of opening: 1891.

Superintendent: Miss Emma Mueller.

Orthopedic surgeon: Sidney A. Twinch, M.D.

Class: Hospital.

Average number of children: 45. Capacity: 56.

Plant: City lots; modern brick building has dispensary and some wards, and old residence has other wards and employes' rooms. Walls calcimined or painted; floors of wood, unpolished. Stairs have slate steps in dispensary building. One fire-escape on old building.

Admission: No age limit; both infants and adults have been taken; lung tuberculosis and feeble-minded cases not desired, but sometimes taken.

Discharge: As soon as can be transferred to dispensary; great demand for beds.

Facilities for care of children: Operating room. Medical staff, including orthopedic specialists; superintendent and head nurse are graduate nurses; training school with one-year course has five nurses in training; masseuse. Excellent outdoor sleeping facilities for 20 on porches. Epidemics have been rare; then most cases sent to City Hospital. Measles and whooping cough isolated here in one ward and children are isolated upon admission, but no special ward is kept solely for this use. Elevator in dispensary building. Large dispensary service two days a week. Children often sent in summer to fresh air home at Westfield, which has no official connection with this hospital.

School: None.

Hand work and vocational training: None.

Cost of property: $63,700.

Year's expenditure per capita: $233.

Comment: The name is no longer accurate, for the institution has

hospital facilities, and children come for operations and post-operative care. Most patients are bed cases and there is no dining room or day room for children. The pressure for beds and large dispensary service suggests the need of both a larger city plant and a country convalescent home open all the year. In spite of the strictly hospital nature of their surroundings the children seem happy and many efforts are made to entertain them.

NEW JERSEY

NEW JERSEY ORTHOPAEDIC HOSPITAL AND DISPENSARY, 148 Scotland Street, Orange

Date of opening: 1903.

Superintendent: Miss Emma McGall.

Orthopedic surgeon: Robert E. Humphries, M.D.

Class: Hospital.

Average number of children: 10.4. Capacity: 16.

Plant: About one acre of land with wooden residence for hospital; dispensary in office on Main Street; both rented. Hospital has second stairway. Roof reached easily. Walls papered except in operating room where painted; floors of bare wood.

Admission: From one and a half years; no boys over sixteen; no lung tuberculosis; preference to New Jersey children.

Discharge: After dispensary care can be safely substituted; average stay three months. Boys not kept after sixteen.

Facilities for care of children: Operating room. Visiting surgeon-in-chief is orthopedic specialist. Superintendent and two nurses are all graduate nurses. No special isolation rooms, but there are several small wards and one of them could be used for isolation. Small children are not admitted to the wards as visitors because it is thought that they are more likely than adults to bring contagion; efforts are also made to discourage parents from bringing with them to dispensary children who are not patients. Visiting nurse from Visiting Nurse Association gives half her time to cases from this hospital.

School: Non-resident teacher daily. Tables and chairs used for the few children able to be out of bed. Largely individual instruction.

Hand work and vocational training: None.

Cost of property: Plant rented. Aggregate cost of surgical equipment and furniture, $2,345. Surgical equipment per capita, $7. Furniture per capita, $140.

Year's expenditure per capita: $894.

OUTDOOR SLEEPING. (See page 149)
Hospital for Deformities and Joint Diseases, New York City

OUTDOOR SLEEPING (All weathers). (See page 156)
Children's Orthopedic Hospital, Seattle, Washington

HOSPITAL FOR DEFORMITIES AND JOINT DISEASES, New York City. (See page 149)

Comment: This little institution combines hospital care with an atmosphere which is very homelike and cheerful. It deserves a modern plant where the fire danger would be less and isolation facilities better, and where modern finish would make it easier for the employes to maintain the high standard of cleanliness which they now achieve even in an old building.

NEW YORK

HOSPITAL FOR DEFORMITIES AND JOINT DISEASES, 1915–19 Madison Avenue, New York City

Date of opening: 1906.

Class: Hospital. Surgeon-in-chief and superintendent: Henry W. Frauenthal, M. D.

Average number of children: 49. Capacity: 57.

Plant: Several old brick residences thrown together. New dispensary building planned. Because buildings are far from fireproof, special precautions are taken to prevent fire and to provide easy exit. Fire doors between buildings. Iron outside stairways with wide platforms carefully railed. Extinguishers filled twice a year, marked with date of last filling. Painted walls; floors covered with asbestolith in wards, linoleum in office.

Admission: All ages; no lung tuberculosis.

Discharge: After dispensary care can be safely substituted; average stay about six months.

Facilities for care of children: Visiting medical staff, including orthopedic specialists; superintendent and three nurses are graduate nurses; seven other nurses, some of whom have been trained at the Hospital for the Ruptured and Crippled in New York and the New York Orthopædic Hospital; 26 masseurs and masseuses in clinic. Operating room, X-ray, Zander room, massage and special gymnastics. Outdoor sleeping for nine children on iron balconies. Indoor children's ward has not had windows closed for five years. Thresholds absent or very low. No elevator. Night watchman who goes through buildings every half hour, and three night nurses. Fire drills twice each week. No special isolation ward. Plan to start visiting nursing. Large dispensary service daily.

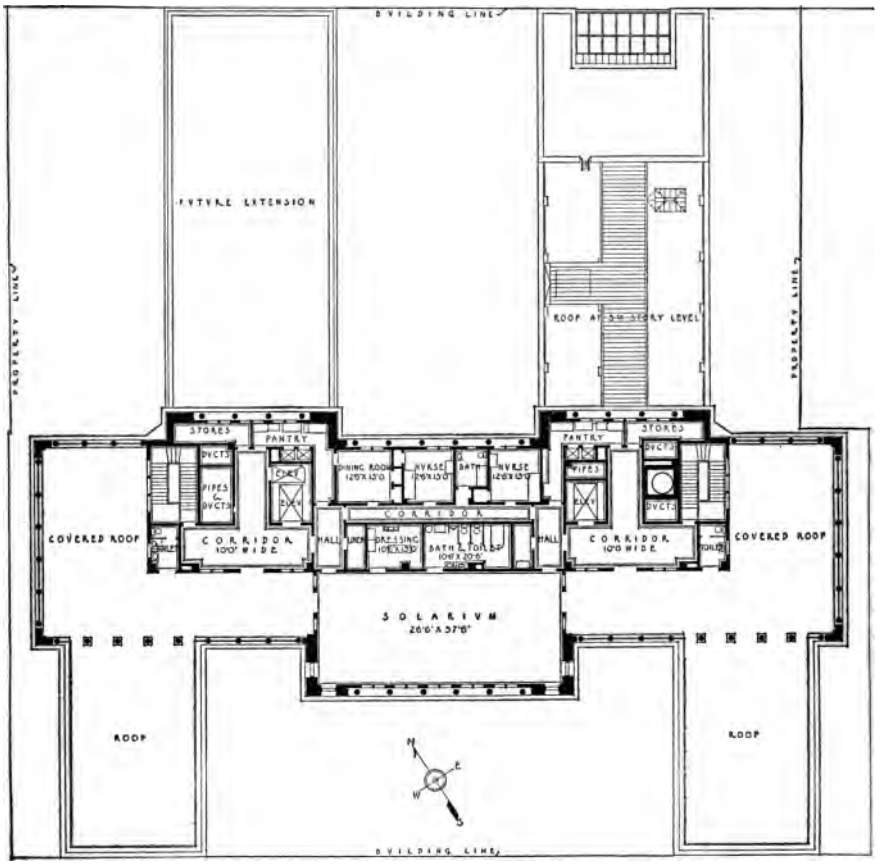
School: None. A few children able to go have been sent to a nearby public school.

Hand work and vocational training: None.

Cost of property: $104,500.

Year's expenditure per capita: $895.

Comment: The buildings face a park and there is freer access for light and air than is the case in most city hospitals which are not in specially constructed buildings. The heavy demand for beds could be better met by the hospital if it had a branch for convalescent cases in the country. The hospital has a ward for adult men and one for adult women, and several small private rooms, in addition to the ward and sleeping porch for children.



NEW YORK HOSPITAL FOR THE RUPTURED AND CRIPPLED
Sixth Floor Plan. (See page 154)

NEW YORK

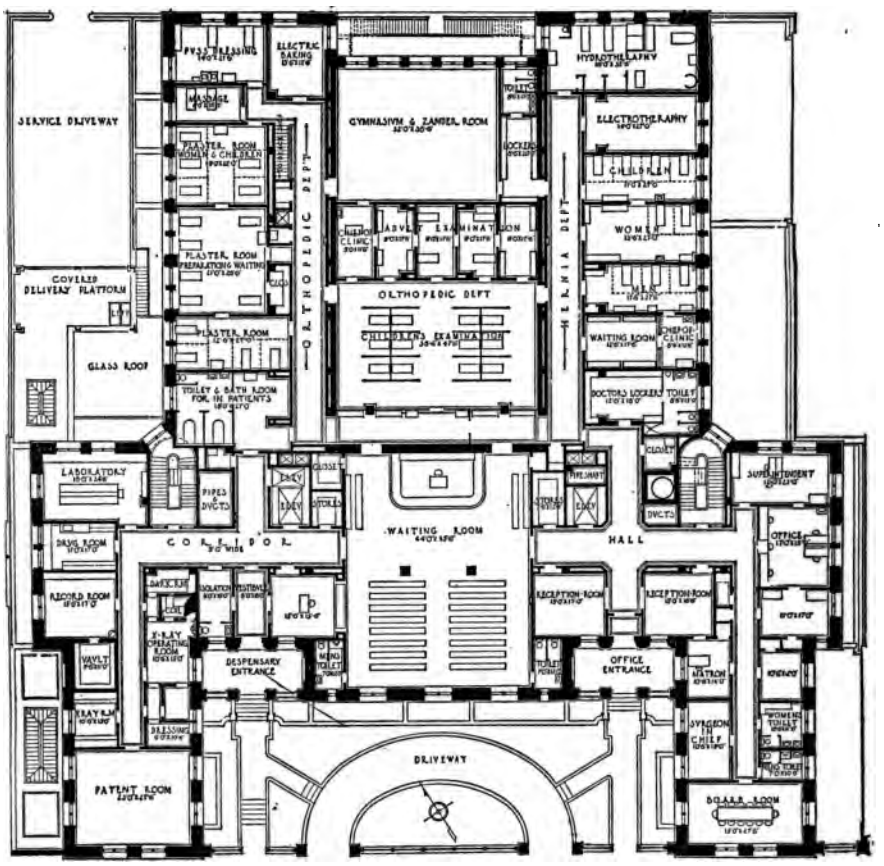
HOSPITAL OF THE NEW YORK SOCIETY FOR THE RELIEF OF THE RUPTURED AND CRIPPLED, 321 East 42d Street, New York City

Date of opening: 1863.

Superintendent: Mr. Oliver H. Bartine.

Orthopedic surgeon: Virgil P. Gibney, M.D.

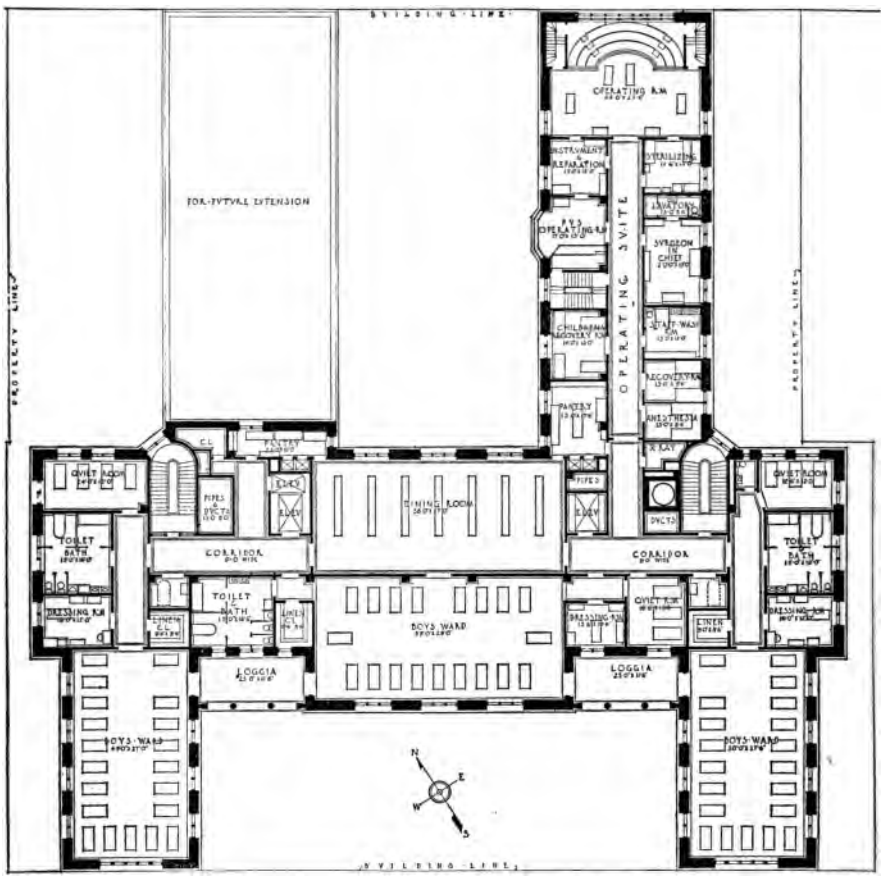
Class: Hospital.



York and Sawyer, Architects

NEW YORK HOSPITAL FOR THE RUPTURED AND CRIPPLED
First Floor Plan. (*For Elevation see p. 6*)

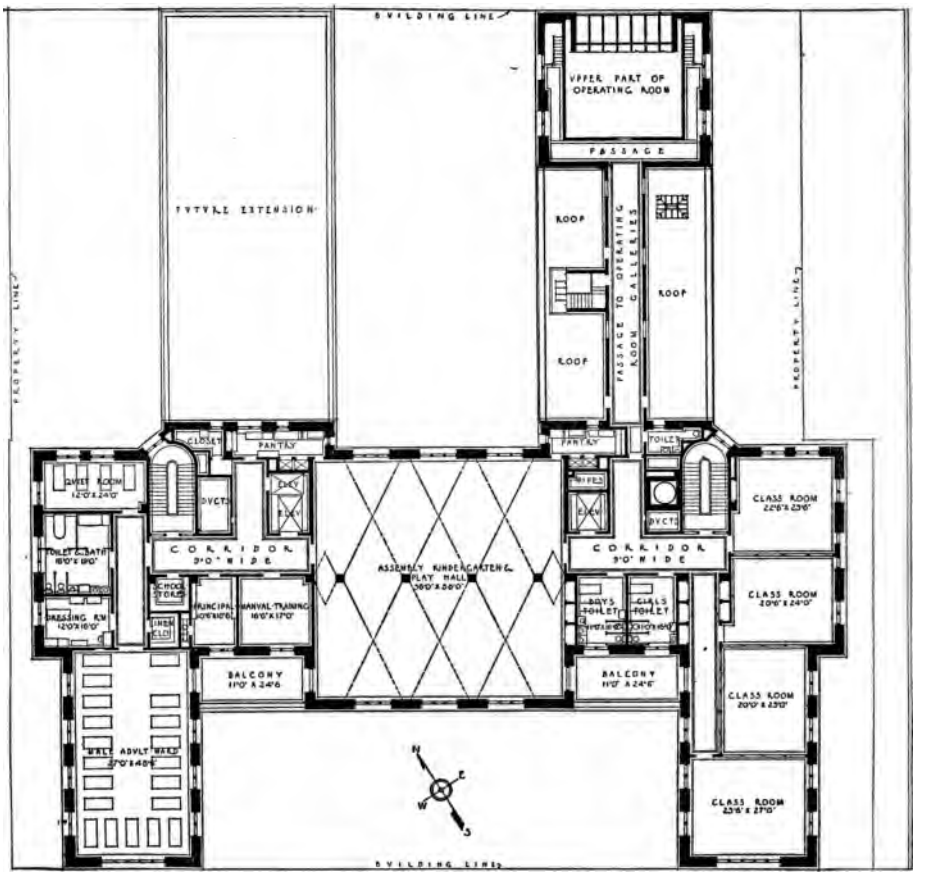
Average number of children: 192. Capacity: 250.
Plant: City lot 200 by 200 feet. Brick building (erected 1912) is of modern fireproof construction; two enclosed staircases separated



NEW YORK HOSPITAL FOR THE RUPTURED AND CRIPPLED
Fourth Floor Plan

from corridors by fireproof doors; also an enclosed emergency staircase and two fire-escapes. Two passenger elevators enclosed, large enough to carry stretchers, also freight elevator. Machinery in laundry includes both sterilizing washer and dry sterilizer.

Kitchen with tile floor and modern cooking apparatus. Dispensary on first floor with tile floor and sanitary base. Marble partitions in orthopedic examination rooms form 12 booths for children;



NEW YORK HOSPITAL FOR THE RUPTURED AND CRIPPLED
Fifth Floor Plan

small separate rooms for adults. Record room with fireproof vault. Second floor is a low story with rooms for employes, one wing for superintendent and internes, one for matron and graduate nurses, one for housekeeper and nurses who are not graduates.

Four ward units on third floor (one for adult women); three on fourth floor. On fifth floor, large room decorated very attractively with friezes showing flowers and animals, is used for kindergarten, dining room at noon, play room and special entertainments. Ward for men on this floor. Most sanitary and enduring material used in finishing the building throughout; terrazzo floors in corridors and dining rooms; buff tile in wards, white tile in quiet rooms and toilet rooms; cement in employes' rooms; wood in offices, gymnasium, and school rooms.

Admission: From four years up; special wards for adult men and women.

Discharge: After dispensary care can be safely substituted; average stay sixty-five days.

Facilities for care of children: Visiting medical staff, including large number of orthopedic specialists. Two operating rooms, one of them a large amphitheater with 50 seats; X-ray department, also rooms for electrotherapy and hydrotherapy, as well as massage, special gymnastics, and work with Zander apparatus. Seven graduate nurses, 10 not graduated but experienced in orthopedic nursing; two night watchmen. Fire drills. Brace shop; solarium and day porches. Sixth floor has large solarium with small adjoining rooms for use as isolation ward in case of need. Will not be set aside for isolation until need arises. Very large roof space, some covered, some uncovered, for use by day. One social service worker engaged recently. Large dispensary service daily. Three elevators; thresholds absent. At the exercises held for the formal opening of the new building, both the president of the board and the surgeon-in-chief expressed the hope that the next step might be the establishment of a country branch for the care of convalescent cases. Children from this hospital have been sent to several summer institutions in the country not officially connected with the hospital.

School: Graded, with seven non-resident teachers and 132 pupils. Institution selects teachers and city board of education pays $15 per year for each pupil, on basis of average number computed from total days of attendance. Tables and chairs used.

Hand work and vocational training: Sewing, chair-caning (basketry in summer), elementary carpentry, taught by teacher from People's University Extension Society.

Cost of property: $1,298,000.

Year's expenditure per capita: $567.

Comment: This modern fireproof building represents the acme of

OUT-PATIENT DEPARTMENT. (See page 156)
Children's Orthopedic Hospital, Seattle, Washington

FRIENDLY VISITORS. (See page 218)
Good Shepherd Home, Allentown, Pennsylvania

The Dispensary

Outdoor Clinic. (See page 155)
NEW YORK ORTHOPÆDIC DISPENSARY AND HOSPITAL, New York City

achievement in orthopedic hospital construction in America. Here and at the Widener Memorial School in Philadelphia, the best materials known have been used and the latest equipment installed at every point.

NEW YORK

NEW YORK ORTHOPÆDIC DISPENSARY AND HOSPITAL, 126 East 59th Street, New York City

Date of opening: 1866.

Superintendent: Mr. Charles H. Burr.

Orthopedic surgeon: Russell A. Hibbs, M.D.

Class: Hospital.

Average number of children: 62. Capacity: 70.

Plant: Four old brick and stone residences on city lots, connected to form one building. The section which contains wards for the children has been made partly fireproof and can be shut off from remainder of building by metal doors. Another similar house for nurses' home. Iron outside stairways with large platforms at front and rear of hospital and rear of nurses' home. Painted walls; bare wooden floors.

Admission: From two years up; no boys over fourteen; adult women taken; no lung tuberculosis; no markedly feeble-minded cases, because they need special care.

Discharge: After dispensary care, or care in Country Branch at White Plains can be safely substituted; average stay fifty days.

Facilities for care of children: Operating suite with X-ray machine; medical staff including orthopedic specialists, two resident physicians; superintendent of nurses and two other hospital nurses are graduate nurses; other nurses trained for orthopedic nursing in the hospital, though there is no formal training school. Well equipped corrective gymnasium; two trained gymnastic teachers and two masseuses. Night watchman. Automatic elevator, enclosed, not near any stairway. Thresholds absent in parts of building most used by children. No day rooms for children. Preliminary visits and after care through five visitors, two of whom are graduate nurses, one a social service worker and two nurses of experience with orthopedic cases; last year 8,498 visits paid to homes by visiting nurses and 7,020 visits by surgeons of the hospital. Large brace shop makes appliances which are rented at cost, or free if patient is unable to pay. Large dispensary service daily. Each patient is cared for throughout treatment by the same surgeon.

School: Non-resident teacher spends two afternoons with children able to be up and sit at tables, and two afternoons with bed patients. Instruction largely individual, with little class work.

Hand work and vocational training: None.

Cost of property: Plant too old for figures of cost to have significance. Planning new building. Present property has market value of about $150,000.

Year's expenditure per capita: $977.

Comment: Children come here for examination, operations and post-operative treatment, after which they are either transferred to the Country Branch and Industrial School at White Plains, or cared for through the dispensary. The exceptional thoroughness with which cases are "followed up" is worthy of study. Although the hospital treats great numbers of patients in the course of a year, the aim of the institution is consistently toward quality, not quantity, of work; that is, the final cure of each case accepted, or as near an approach to cure as the nature of the case makes possible. Cases sent to the Country Branch are kept there not only until all improvement which seems possible has been attained, but until it is believed that the danger of relapse is past. All convalescent cases cared for through the dispensary are visited in their homes by nurses and if necessary by the surgeons, and strong efforts are made to secure regular attendance at the dispensary. The staff in the hospital itself is hampered by old-fashioned buildings. Plans are being made for the erection of new buildings on another site, with 100 hospital beds and large dispensary space.

WASHINGTON

CHILDREN'S ORTHOPEDIC HOSPITAL, 2107 Warren Avenue, Seattle

Date of opening: 1907.

Superintendent: Miss Lillian Carter.

Orthopedic surgeons: Casper W. Sharples, M.D., Fred J. Fassett, M.D., Park Weed Willis, M.D., James B. Eagleson, M.D.

Average number of children: 27. Capacity: 50.

Plant: City lots with thoroughly modern building planned with view to future enlargement; walls of reinforced concrete; refrigerating plant extending through all floors to diet kitchens. Steam laundry with modern machinery. Two enclosed inside stairways; outside steel stairway, railed, used constantly by helpers. Yates system of fire protection. Standpipe and hose. Drinking fountains. Hard plaster walls; cement floors, some covered with battleship linoleum, some with special composition.

Admission: Up to sixteen years; no lung tuberculosis.

Discharge: After dispensary care can be safely substituted; average stay forty-four days.

Facilities for care of children: Operating suite including X-ray machine. Visiting medical staff, including orthopedic specialists; four senior surgeons, each with an assistant, visit all clinics at hospital on three months' service, and for one day each week during other nine months so that each surgeon may continue supervision of cases which have come to him. Three rooms for private patients who pay hospital for care. Superintendent, surgical nurse, and nurse in out-patient department are graduate nurses; five pupil nurses from other hospitals in the city who spend three months of their senior year here. Isolation in receiving room in basement or in room ordinarily in use by maid; very few cases have required isolation. Thresholds absent. Semi-outdoor sleeping in wards where windows are never closed and the air seems identical in quality with that out of doors. Nurse in out-patient department pays preliminary visits to homes of patients and supervises cases discharged.

School: Grade teacher from city board of education. Students from kindergarten training school come for one week each to teach the kindergarten. Many pupils in bed. Others use tables and chairs. Classes all held in wards.

Hand work and vocational training: None.

Cost of property: $111,600.

Year's expenditure per capita: $481.

Comment: The building was erected after visits by officers and employes to many leading orthopedic institutions in the East, and shows both the adoption of good ideas learned elsewhere and ability to adapt these ideas to meet the special needs of this hospital.

B. CONVALESCENT HOSPITALS OR HOMES

ILLINOIS

CONVALESCENT HOME FOR DESTITUTE CRIPPLED CHILDREN, R. F. D. No. 2, West Chicago

Date of opening: 1911.

Superintendent: Miss Margaret Little.

Orthopedic surgeon (consulting): John Ridlon, M.D.

Class: Convalescent hospital.

Average number of children: 40. Capacity: 60.

Plant: Excellent. Farm of 96 acres, run by farmer living in original farm house. All other buildings of cement, fireproof; main building, isolation, also school building in process of erection. Modern interior finish and equipment. Tile, cement, and maple floors; enamel and painted walls; cork matting on halls. Unusually pleasant servants' quarters: for men in basement with good light, for maids on third floor. Complete precautions against fire include tank, hydrants, extinguishers; fire-escapes tested twice each week. Drills planned.

Admission: Four to fourteen years. Cases from Home for Destitute Crippled Children in Chicago. Curable cases; seldom bed cases. No lung tuberculosis; no obviously feeble-minded. Colored children admitted.

Discharge: After cure. Average stay expected to be long.

Facilities for care of children: Superintendent a graduate nurse; visiting surgeons and physicians. Admirable isolation building where cases of two diseases can be separately isolated. Outdoor sleeping porches for children; also first floor porch for daytime naps. Unrestricted outdoor play space; children watched when out of doors by nurse maid. Lavatories on first floor for day use.

School: Taught by experienced teacher formerly at Spalding School for Cripples in Chicago. Desks adjustable as to height.

Hand work and vocational training: Sewing, simple housework, gardening. Plan to teach all branches of housework and many kinds of farm work, including dairying.

Cost of property: $108,000.

Year's expenditure per capita: $330.

Comment: Plant and equipment are admirable and worthy of study by anyone interested in building a small convalescent hospital or home on thoroughly modern lines.

MARYLAND

CHILDREN'S HOSPITAL SCHOOL, Green Spring Avenue, Baltimore

Date of opening: 1912.

Superintendent of nurses: Miss M. E. Kinsey.

Orthopedic surgeon: William S. Baer, M.D. (medical director.)

Class: Convalescent hospital.

Average number of children: 30. Capacity: 50.

Plant: 17 acres on outskirts of Baltimore. Modern building of reinforced concrete faced with marble. Floors of cement and tile construction; walls fireproof in sections used by children; linoleum on hall floors. Outside stairways. Cement walls, to be painted.

Admission: From three to ten years; preference to Maryland children; cases likely to be cured or distinctly improved; no lung tuberculosis; no feeble-minded.

Discharge: After being benefited as much as possible, up to thirteen years.

Facilities for care of children: Staff of visiting surgeons and physicians, including specialists of many kinds. Institution will ultimately take all other kinds of children's cases as well as orthopedic cases. Operating room; some major operations done at Johns Hopkins Hospital. Superintendent a graduate nurse. Other nurses for periods of three months from Church Home and Infirmary where they are in training. Special gymnasium. Isolation ward and bath. Children isolated only if disease develops, not upon entrance. All the children sleep on two outdoor sleeping porches separated by glass-walled office for night nurse; glass-enclosed porch for play during day. Unlimited outdoor space. Play tent 20 by 24 feet. Elevator; thresholds absent, or very low; incline from porch.

School: Teacher for grade subjects supplied by city board of education. Ten adjustable and ten special desks.

Hand work and vocational training: Advanced kindergarten work, basketry, chair-caning taught by teacher from Playground Association, half of whose salary is paid by the Hospital School. Plan to teach farming and dairying later.

Cost of property: $72,000.

Year's expenditure per capita: $346.

Comment: A building worthy of study by people planning to build a small hospital, as to modern construction in general and especially as to the arrangement of sleeping porches. Much thought spent on details of equipment. Each child's small possessions kept in flat cloth bag strapped at foot of his bed, instead of gathered bag hung over bed post as in many other places; large screens in dressing rooms have attached to the inside a hook for each child, where night garments hang by day and day garments by night.

MARYLAND

JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF MARYLAND FOR CRIPPLED CHILDREN, Hillside, near Baltimore

Date of opening: 1895.

Superintendent and surgeon-in-chief: R. Tunstall Taylor, M.D.

Class: Convalescent hospital.

Average number of children: 53. Capacity: 55.

Plant: A beautiful estate of 63 acres, known as Radnor Park, reached from Baltimore by trolley in about an hour. Exceptionally beautiful grounds. Old mansion house of stone, very well built, successfully adapted to institution's needs. Painted walls; bare floors. Two movable canvas chutes for escape in case of fire. Fire drills held. Wooden farm house used by nurses. Lodge and rooms over stable for colored servants. Vegetables and fodder raised; milk from cows belonging to institution; chickens, squabs, and hogs are raised.

Admission: Up to sixteen years; preference to Maryland children; no lung tuberculosis. Backward children admitted, but none who are obviously feeble-minded.

Discharge: After being benefited as much as possible; age limit undecided.

Facilities for care of children: Surgeon-in-chief, an orthopedic specialist, pays almost daily visits; two resident physicians; superintendent of nurses, and three other graduate nurses; eight nurse maids in training. Operating room; small equipment for special gymnastics. Outdoor sleeping accommodations for 17 children on large porch. Tent used for isolation; special care to prevent introduction of infectious diseases; strict rules as to visitors, who are required to wear linen dusters if they enter wards. Children's elevator enclosed in terra cotta. Thresholds very low. Night nurse and two ward maids on duty, and orderly subject to call. Marble slabs for baths in addition to tubs. After-care through dispensary in Baltimore and three visiting nurses.

School: Two teachers divide grade and hand work. One is supplied by city board of education, one by the institution. Desks adjustable as to height.

Hand work and vocational training: Sewing, lace making, rug weaving, basketry, chair-caning, burnt wood work, stenography and typewriting.

Cost of property: $84,000.

Year's expenditure per capita: $532.

Comment: A notable example of the possibility of adapting substantial old houses with large rooms for hospital uses. The administrative system has been carefully worked out. A small printed pamphlet of "rules and regulations" is given to each new employe. The cheerful atmosphere and esprit de corps clearly evident here are important in a country institution where the em-

ployes spend most of their leisure time, as well as working hours, together.

MASSACHUSETTS

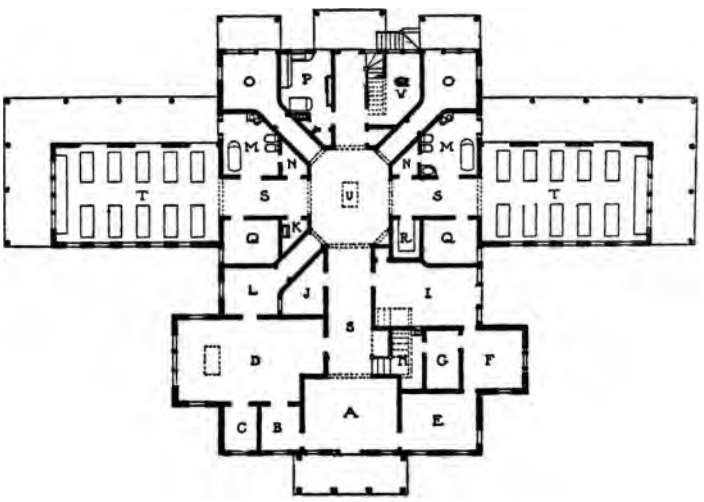
MASSACHUSETTS HOSPITAL SCHOOL, Canton

(Built and maintained by the Commonwealth of Massachusetts)

Date of opening: 1907.

Chairman board of trustees: Edward H. Bradford, M.D.

Superintendent: John E. Fish, M.D.



S. W. Mead, Architect

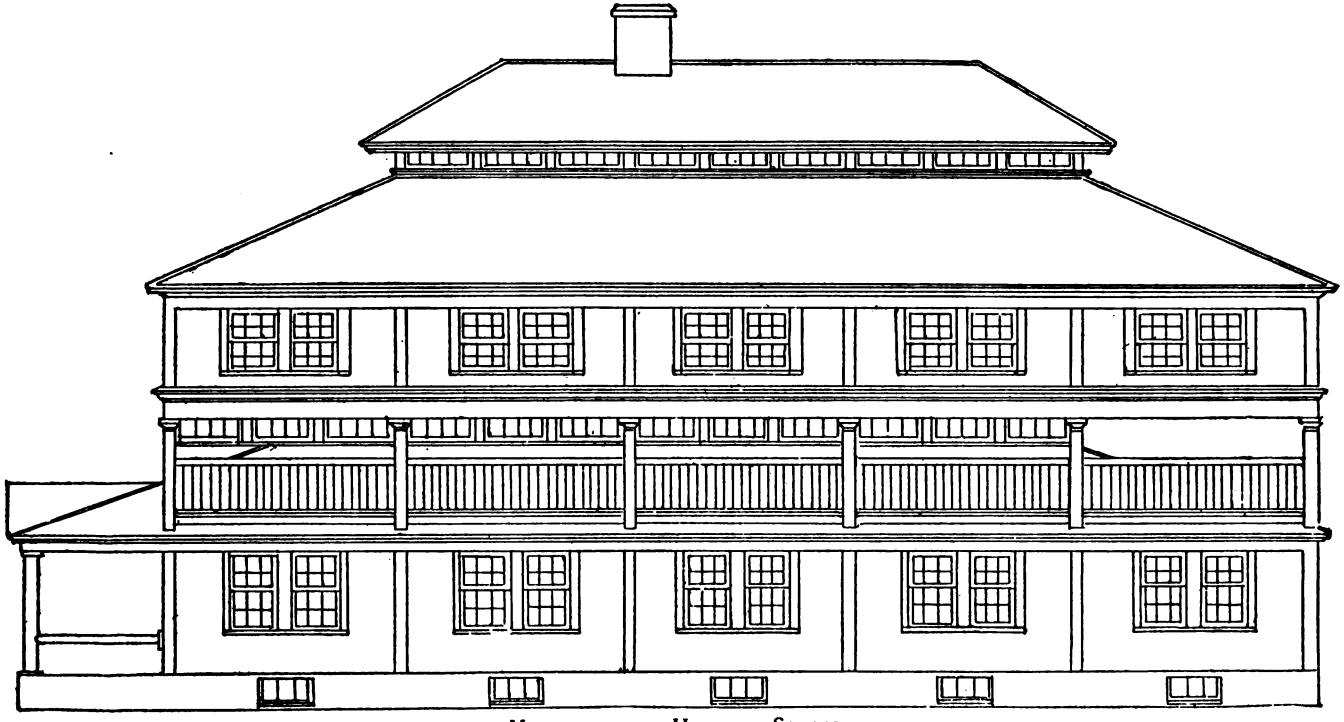
MASSACHUSETTS HOSPITAL SCHOOL
Infirmary Floor Plan

Orthopedic surgeons: Robert W. Lovett, M.D., Augustus Thorndike, M.D., Robert Soutter, M.D.

Class: Convalescent hospital.

Average number of children: 229. Capacity: 250.

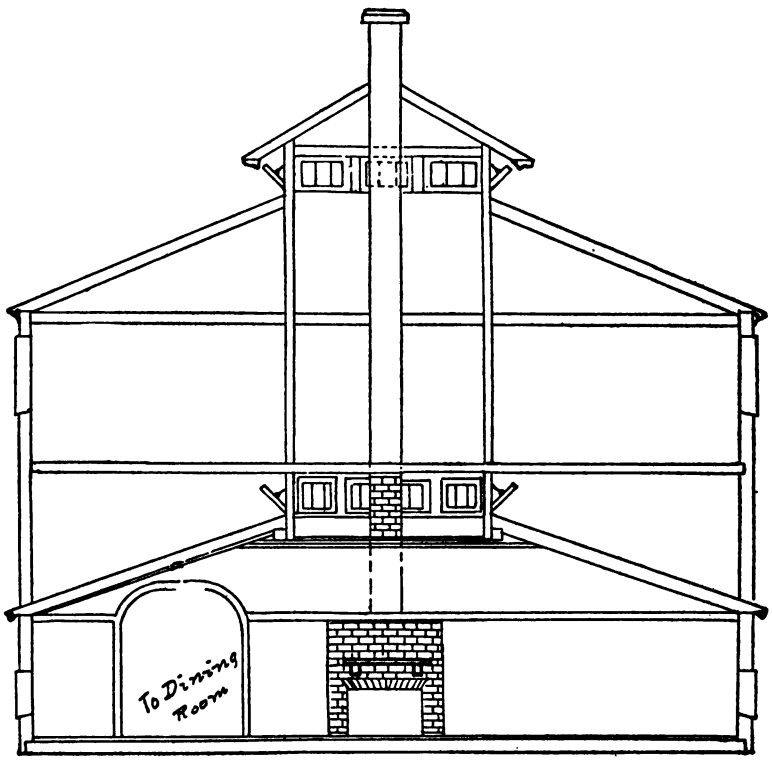
Plant: 65 acres of land, of which 20 are cultivated by farmer and helpers, and 35 acres are heavily wooded. Administration building, power house, and assembly hall of brick; two dormitory buildings, older girls' cottage, industrial building, hospital building, and barns of wood. Modern interior finish and equipment. Walls of hard plaster painted; floors of bare wood in most rooms, of special



MASSACHUSETTS HOSPITAL SCHOOL
Two-story "Monitor Roof" Cottage

compositions in operating room and in many toilet rooms. Iron fire-escapes on main building where employees sleep on upper floors.

Admission: From five to fifteen years; must be residents of Massachusetts; no feeble-minded or epileptic. No color restriction.



Cross section through living room

MASSACHUSETTS HOSPITAL SCHOOL
Cross Section of Two-story Monitor Roof Cottage, Showing Unique False Roof and Ceiling Ventilation Transoms in Both Stories, Which Prevent Drafts and Defy Storms

Discharge: After being benefited as much as possible. May remain somewhat longer for educational reasons.

Facilities for care of children: Visiting medical staff, including orthopedic specialists. Superintendent is a physician; assistant physi-

cian; three graduate nurses; 15 nurse maids and four men attendants. Night watchman; night nurse maids. Separate hospital building for bed cases, with operating room, which contains a glass-enclosed space within which operations are performed. A few pieces of special gymnastic equipment in an "exercise room." Isolation facilities include small portable shacks for use when there are a few cases of contagious disease; each has a main room 10 by 12 feet, a kitchen annex 7.5 by 7.5 feet, and a small screened veranda, which cost $205: earth closets disinfected with chloride of lime. The hospital building has isolation rooms used for newly admitted children and for suspected cases of infectious disease. Building is so constructed that child can be moved directly from either isolation ward to porch, thence to a quarantine shack, without passing through any hall or other room. The newly constructed boys' cottage was used for isolation, considerable space being necessary during epidemic of measles. Children's dormitories in cottages with monitor roofs which provide perfect ventilation; new cottage for older boys, two stories, has monitor arrangement for each story after original design. Unrestricted outdoor space for play and work. Woods and lake; baseball ground. Assembly hall contains theater and library. Older boys and girls live in separate cottages in small groups where life resembles that of large family. No elevators necessary, since children live entirely on first floor level; thresholds absent; inclines unnecessary since buildings are almost at ground level.

School: Graded school with principal and two other teachers. Two of the three class rooms are out of doors. Adjustable desks, also tables.

Hand work and vocational training: Sewing, complete course in housekeeping, manual training, practical carpentry, printing, cobbling, farming, stationary engineering, music. High development of "apprenticeship system" of vocational training.

Cost of property: $276,000.

Year's expenditure per capita: $291.

Comment: This is the largest institution for crippled children in America; well housed, well equipped, and conducted according to an administrative system which has been most carefully worked out. In spite of the large number of children, there is but a minimum of institutionalism. The life of the older girls and older boys, in simple cottages where a small number live after the fashion of a large family, is noteworthy. The results achieved through

vocational training evolved from the daily life of a large institution are most strikingly seen here and at the Widener Memorial School.

MICHIGAN

VAN LEUVEN BROWNE HOSPITAL SCHOOL, 31–33 Kenilworth Avenue, Detroit

Date of opening: 1907.

Superintendent: Miss Laura E. O'Neill.

Orthopedic surgeon: None. Visiting physician, H. A. Shafor, M.D.

Class: Classed with convalescent hospitals, but in many respects has close resemblance to asylum home.

Average number of children: 25. Capacity: 30.

Plant: Double house of brick on two city lots. Two stairways. There is a fire-engine house near. The firemen have been over the institution and know where to find the children in case of fire. This does not cancel need of fire-escapes, which would decrease the risk for children in wards on second floor. Floors painted; walls have paint over paper except in one dormitory where paper was scraped off before walls were painted.

Admission: From three years; all kinds of cases, including a few blind children and well children in need of a home.

Discharge: After they no longer need a home.

Facilities for care of children: No hospital connections. Four visiting physicians, two of them osteopathic. President, who lives in institution, has been crippled since childhood, from tuberculosis of the spine. Three nurse maids without previous training. There is a surgical dressing room but dressings are usually done in wards. All the children are taught danger of infection from dressings worn by those with abscesses. Winter play room with good light. Thresholds absent; incline, to back yard. Shacks in this yard provide sleeping places for all the children from May until cold weather comes in the autumn. Sand pile, swings.

School: Simple branches taught by resident German teacher, in English and German. Tables and chairs.

Hand work and vocational training: None.

Cost of property: $10,400.

Year's expenditure per capita: $153.

Comment: The life in this small home is much like that of a large family; there is little to suggest an institution except the number of beds in the sleeping rooms. The children are very much attached to all the people who care for them and good humor prevails.

MINNESOTA

MINNESOTA STATE HOSPITAL AND SCHOOL FOR INDIGENT CRIPPLED AND DEFORMED CHILDREN (Country Branch), Phalen Park
(Maintained by the state of Minnesota)

Date of opening: 1910.

Matron: Miss Marie D. Hoppe.

Orthopedic surgeon: Arthur J. Gillette, M.D.

Class: Convalescent hospital.

Average number of children: 38. Capacity: 60.

Plant: 23 acres of land; fireproof building of cement and terra cotta, with completely modern equipment. Painted walls; floors of special composition throughout first floor. No fire-escapes, children all on first floor; fire drills held. Servants' rooms above kitchen wing, with no access to rooms of other employes, which are over central part of building. Building can be enlarged by adding wings at rear.

Admission: From five to seventeen years; Minnesota children only; no color restriction; no lung tuberculosis; no feeble-minded. Cases come from city branch in St. Paul.

Discharge: After being benefited as much as possible; age limit undecided.

Facilities for care of children: Visiting medical staff, including orthopedic specialists; matron and head nurse are graduate nurses. Operations in city of St. Paul. Surgical dressing room. Children sleep in two long dormitories from which beds can be rolled out on to cement terraces on either side. Many doors give cross ventilation almost equivalent to outdoor sleeping. Sun parlors for day use. Unrestricted outdoor play space. Night attendant. Four small isolation rooms with bowl and toilet in each; each with separate outside entrance. Each child isolated for a week upon admission. One piece of gymnastic stretching apparatus for correction of lateral curvature in surgical dressing room. No elevator necessary since children live entirely on ground floor level. Thresholds absent.

School: Taught by non-resident teacher, work in all grammar grades offered. Tables and chairs.

Hand work and vocational training: Sewing, simple housework, manual training, and furniture making. Teaching of elementary housework is especially thorough. Special teacher gives entire time to hand work. Plan to develop farm industry.

Cost of property: $68,000.

Main Building

School Room

Boys' Ward

STATE HOSPITAL AND SCHOOL FOR CRIPPLED CHILDREN, Phalen Park, Minn.

(See page 166)

The Sun Bath ("Heliotherapy")

Outdoor Sleeping Porch
SEA BREEZE HOSPITAL, Coney Island, New York. (See page 167)

Year's expenditure per capita: $300.

Comment: This building deserves special study as to its general construction and as to arrangement, especially the dormitories and school rooms which are open to sun and air on three sides. A good foundation has been laid for thorough education, which will include more and more vocational training if enough children need to stay until they reach an age when they are ready for it.

NEW YORK

SEA BREEZE HOSPITAL, Surf Avenue and 29th Street, Coney Island
(Maintained by The New York Association For Improving the Condition of the Poor)

Date of opening: 1904.

Superintendent: Miss Josephine T. W. Brass.

Orthopedic surgeon: James H. Hutchins, M.D.

Class: Grouped with convalescent hospitals because of location and long stay of patients. Otherwise resembles institutions classed as hospitals.

Average number of children: 42. Capacity: 42.

Plant: Wooden building on grounds of Sea Breeze, a fresh air home used in summer for mothers and children from New York. Orthopedic cases only in this building; open all the year. Painted walls; bare floors, unpolished. Buildings of Sea Breeze used in winter for hospital purposes if needed. Some hospital employes sleep there in summer also. Outside iron stairway to ground, corrugated treads; fire alarm.

Admission: From two to twelve years; no color restriction; tuberculosis of bones and glands only; preference to bone cases. Seldom take feeble-minded or cases likely to derive but little benefit.

Discharge: After being benefited as much as possible.

Facilities for care of children: Weekly visits from surgeon-in-chief, an orthopedic specialist; two graduate and three "practical" nurses. All orthopedic operations performed in operating room. Sun baths with exposure of sinuses to sun and air. Admirable ventilation of dormitories with many windows provides practical equivalent for outdoor sleeping. Big porches with beds where bed cases stay all day. Building on beach, sea bathing for many children. Isolation in tent in summer; in winter, in unused buildings of Sea Breeze. After-care through agents of the New York Association for Improving the Condition of the Poor.

School: In summer, tent with wooden floor, lower part of the walls

of wood, and canvas above; in dining room in winter. Teacher furnished by New York City board of education. Non-adjustable desks and tables.

Hand work and vocational training: Some sewing and basketry; advanced kindergarten work taught by kindergarten teacher furnished by city board of education.

Cost of property: Not separated from Sea Breeze.

Year's expenditure per capita: $510.

Comment: A hospital on the seashore with every possible advantage in respect to sun and fresh air needed in the cure of tuberculous children. The wooden building would burn readily, but there is good provision for escape in case of fire from parts of building used for children. Permanent buildings for this hospital will be erected at Rockaway Park.

NEW YORK

HOUSE OF ST. GILES THE CRIPPLE, Garden City, Long Island

Date of opening: 1891.

Superintendent: Miss Regina Morgan.

Orthopedic surgeon: Burr Burton Mosher, M.D.

Class: Convalescent hospital.

Average number of children: 45. Capacity: 85.

Plant: Nearly four acres of land; cows and chickens kept. Group of wooden buildings; former residence used as main building includes chapel, girls' dormitories and employes' rooms; boys' dormitory building; school house; building for surgical cases. Roof ventilation in boys' dormitory and surgical building; somewhat similar result in main building because windows in attic are kept open. Second stairway; fire drills; iron fire-escapes. Most children sleep on first floor level.

Admission: Up to sixteen years. Very few feeble-minded cases; no new ones will be taken. No color restriction.

Discharge: After being benefited as much as possible, unless they still need a home. At sixteen, children still needing care or having no homes remain indefinitely as helpers.

Facilities for care of children: Visiting medical staff, including orthopedic surgeons. Some operations in Brooklyn hospitals but many in simple operating room at the institution. Two graduate nurses; night nurse. Surgical building could be used for isolation. Unrestricted outdoor play space. Some officer always visits a child's home before he is sent back to it after a stay at the institution.

School: Two teachers; graded school; non-adjustable desks and seats. Older children often sent outside institution to high school.
Hand work and vocational training: Sewing, simple housework.
Cost of property: $26,000.
Year's expenditure per capita: $290.
Comment: The work of this institution is unusually comprehensive in that it offers hospital care for both operative and convalescent cases in the surgical building, and at the same time furnishes a long time or even permanent home with school for children who have no good homes to which they may be sent after as much as possible has been done for them surgically. The system of "helpers" is unique: each child remaining after sixteen is paid $2.50 a month and does such work as he can in the institution. The small money payments are believed to lessen the children's sense of dependence. The atmosphere is homelike, and the children who have been residents for a considerable time have a strong feeling of loyalty to the home.

NEW YORK

ST. CHARLES HOSPITAL FOR CRIPPLED CHILDREN, Port Jefferson, Long Island

(Under the Daughters of Wisdom)

Date of opening: 1907.
Superintendent: Mother Teresa.
Orthopedic surgeon: Charlton M. Wallace, M.D.
Class: Convalescent hospital.
Average number of children: 110. Capacity: 200.
Plant: 21 acres of land, of which 12 are cultivated. Large congregate building of terra cotta brick covered with cement. Modern finish, with utmost care as to sanitary provisions, including plaster walls, floors of cement blocks, bubble fountains, high bathtubs. Cross ventilation in dormitories of 60 beds each. Separate laundry building with modern equipment. Building fireproof; most doors of metal. Fire-escapes considered unnecessary.
Admission: Through Roman Catholic Orphan Asylum Society in Brooklyn. No rule as to color; most children from Brooklyn.
Discharge: After being benefited as much as possible, unless they still need a home.
Facilities for care of children: Operations in institution's operating suite, thoroughly modern, including X-ray machine. Surgeon-in-chief, orthopedic specialist, pays weekly visits; resident physician;

some of the Sisters have had nursing training and experience; two Sisters sleep in each of the three large dormitories. Small solarium. Isolation for colds or other slight ailments in two small wards in hospital building. Serious infectious cases isolated in separate wooden house, generally in use for defective children; two sections which can be completely separated. Preliminary visit to every applicant's home and after care through agents of Catholic Orphan Asylum Society, Brooklyn. Large play room over laundry will be built later. Uncovered roofs of two porches furnish limited sunny space for outdoor use in winter as well as summer. Unrestricted playground space out of doors. Swings. Enclosed elevator; thresholds absent; stairs have unusually easy treads covered with rubber.

School: Graded school with Sisters as teachers. Larger school rooms would be an advantage. Non-adjustable desks and seats.

Hand work and vocational training: Sewing, tailoring, stenography and typewriting. Five of the children now give all day to sewing; some of them attend special school classes held in the evening.

Cost of property: $119,000.

Year's expenditure per capita: $179.

Comment: This hospital is part of a larger institution, the Brooklyn Home for Blind, Crippled, and Defective Children. The hospital is located at a considerable distance from the buildings used for defective children and except in administration is like a separate institution. Provision for crippled children is offered on a very comprehensive basis, including all phases of hospital care, also asylum care and education for incurable cases without good homes. The building may be regarded as a model according to most, if not all, hospital standards. In spite of the present limited indoor play space and the large numbers cared for in a congregate building, the kindness and faithful care of the Sisters have their result in a cheerful atmosphere. If the older children could be in small cottages, it would seem that the large building might well be kept filled with cases needing hospital care and having less need of home-like surroundings than those who are not in bed by day.

NEW YORK

STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN, West Haverstraw

(Maintained by the state of New York)

Date of opening: 1900.

Superintendent and orthopedic surgeon: John Joseph Nutt, M.D.
Class: Convalescent hospital.
Average number of children: 61. Capacity: 75.
Plant: 48 acres of land, including large garden which supplies a good proportion of the vegetables used, orchard and pasture for live stock. Main building is a wooden residence, in Georgian style, beautifully situated; has three stairways, iron stairway outside, enclosed in iron screening; isolation building, solarium (dormitory building), barn used as school building for greater part of year, and shack (dormitory) also of wood. Fire drills held every two weeks. Much need of more space, especially for employes, many of whom have to live outside. Painted walls, bare floors, linoleum in center of wards.
Admission: From four to sixteen years; no color restriction; only children resident in New York state; feeble-minded not often taken.
Discharge: After patients are no longer in need of convalescent care.
Facilities for care of children: Consultant medical staff of surgeons and physicians in cities throughout state. If applicant lives near one of these cities, he is asked to go to the consultant there, who forwards opinion of the case to the hospital. Surgeon-in-chief, who is also superintendent, is an orthopedic specialist; resident physician; graduate nurse. Operating room where all operations are performed. Some non-resident patients come for dressings and brace adjustment. Night watchman and night nurse. Isolation in separate building. New cases are isolated upon admission. A few pieces of special gymnastic apparatus for correction of lateral curvature. No indoor play room, but abundant outdoor space. Two inclines at rear of main building, one from barn used for school classes.
School: Graded school. Resident teacher. Non-adjustable desks and seats.
Hand work and vocational training: Sewing, stenciling, and wood blocking; furniture making taught by special resident teacher.
Cost of property: $78,000.
Year's expenditure per capita: $402.
Comment: This hospital has an excellent location but needs a modern plant. The isolation building serves its purpose well, and the small solarium and shack furnish excellent facilities for outdoor sleeping for a limited number of children; the others sleep in wards in the main building, which do not furnish as good an opportunity for the entrance of light and air. It is difficult to keep a building which is

not modern in its interior finish up to hospital standards of cleanliness. The space for employes is limited in the extreme; many of them live outside the institution and provision for those who do reside in the hospital is inadequate. The spirit of the institution is one of cheerful endeavor to do a great deal of work in crowded quarters. There is little "institutional" atmosphere, and the children seem happy and very much at home.

NEW YORK

COUNTRY BRANCH AND INDUSTRIAL SCHOOL OF THE NEW YORK ORTHOPÆDIC DISPENSARY AND HOSPITAL, White Plains

Date of opening: 1904.

Superintendent: Mr. Charles H. Burr.

Orthopedic surgeon: Russell A. Hibbs, M.D.

Class: Convalescent hospital.

Average number of children: 104. Capacity: 130.

Plant: 12 acres of land. Large brick building; superintendent's cottage of wood; separate power house; small greenhouse. Garden. Main building has painted walls, bare floors for children.

Finish and equipment modern, including tile floors and marble partitions in toilet rooms. Wings where children live, fireproof; fire-escapes for employes.

Admission: From three years up; no color restriction; curable cases only; large proportion of cases of bone tuberculosis. Parents sign statement agreeing to leave child in institution as long as surgeon-in-chief deems necessary for child's health, not legally binding but effective in many cases.

Discharge: After cured and probability of relapse passed.

Facilities for care of children: Operations at the New York Orthopædic Hospital in the city; surgical dressing room here. Surgeon-in-chief, orthopedic specialist, pays weekly visits, reviews all the children, and examines carefully a limited number at each visit. Resident physician; no graduate nurses. Night watchman; two night nurses. Isolation ward with 13 beds and bathroom. Food is brought to this ward through passageway with two doors. Dishes used are washed in the ward, dipped into carbolated water, returned wet to kitchen to be washed again there. Cooking under direction of housekeeper who is expert dietitian. Separate cubicles built within some of the wards do not hinder good circulation of air, yet give children separate rooms. Automatic elevator in central section of building, chiefly for employes. Rubber mats

one yard wide run full length of sun corridors. Homes visited before children are accepted, and children supervised after leaving, if necessary, by visiting nurses of city branch.

School: Graded school with principal and other teachers. Work is comparable at practically all points with that in the best public schools; modern methods and equipment throughout. Desks adjustable as to height.

Hand work and vocational training: Sewing, cooking, simple housework, gardening. Manual training curtailed because there are now few boys old enough to take it.

Cost of property: $420,000.

Year's expenditure per capita: $552.

Comment: This Country Branch of a city hospital is one of the pioneer developments in the direction of unhurried care for convalescent crippled children in country surroundings, after they have received surgical attention in the city. It is well housed and equipped, and administered according to a system which secures efficiency in the work of employes with as little consciousness as possible on the part of the children of the necessary rules. There is a surprising degree of homelikeness for so large an institution, due in part to the cubicle arrangement which gives many of the children separate sleeping rooms, but due even more to the high character of the employes and their skill in creating a friendly relation to the children, which keeps them happy and permits the development of individuality without impairing good discipline.

PENNSYLVANIA

WIDENER MEMORIAL SCHOOL FOR CRIPPLED CHILDREN, North Broad Street and Olney Avenue, Philadelphia

Date of opening: 1906.

Matron and chief nurse: Miss F. Isbell Doolittle.

Orthopedic surgeon: G. G. Davis, M.D.

Class: Convalescent hospital and industrial school.

Average number of children: 96. Capacity: 100.

Plant: 30 acres of land in a suburban residence district; 10 acres in vegetable gardens, 20 for buildings, ornamental grounds, playgrounds, and woodland. A high brick fence with wrought-iron gates bounds the front of the property. The school is approached through wide stretches of landscape gardening as beautiful as those on a country estate. The buildings are of uniform colonial architecture, constructed of red brick, trimmed with

white. There is a large central administration and hospital building, flanked by four smaller buildings and connected with them by glass-enclosed passageways which are heated in winter. The isolation building, head gardener's cottage, engineer's cottage, and stables with rooms for some men employes, are apart from this central group. The main hospital building has kitchen, storage rooms, and sleeping rooms for maids in the basement. The first floor includes reception and office rooms, examining rooms, dentist's room, lavatories, the children's dining room and gymnasium. The second floor has two wards with adjoining sun parlors each accommodating 34. One of these wards is for boys, one for girls. Between them are smaller wards for acute or post-operative cases, surgical dressing room, lavatories, and linen closets. On the third floor there is a surgical suite comparable with those in the most completely modern general hospitals, including etherizing room, operating room, recovery room, sterilizing room, two rooms for X-ray photographic work, a special room for examination of the eye, ear, nose, and throat, surgeon's lavatory and dressing room, and storage rooms. One hundred and five operations were performed during the two years covered by the last printed report.

The cottage for the older girls, and the one for the older boys, of similar design, include in each case library, dining and play rooms, a dormitory with 12 beds and 10 individual rooms for children, and an office and a suite of living rooms for the house mother or house father. Another cottage is the school building, with two grade class rooms and a kindergarten room used also for hand work classes. The fourth cottage serves as residence for the physician, superintendent, and nurses. There are separate cottages for the chief engineer and head gardener, and rooms over the stable for colored men employes. The isolation building can be divided into two parts, each with examination room, ward and bath for children, nurses' room and bath and kitchen. It is used for isolation of infectious diseases and for isolation of children just admitted. A chapel has recently been erected near the central group of buildings in which services are conducted every Sunday.

All interior finish in the buildings is of the most enduring and beautiful materials. Painted walls in most rooms; tile in operating rooms; five-foot tile wainscoting in baths and lavatories, diet kitchens, wards; white marble wainscoting in reception hall. Tile floors in operating suite, baths and lavatories, diet kitchens; granolithic floors in kitchen; marble in reception hall; other floors

of bare wood. Equipment of every sort is modern and complete. Fire risk is at a minimum. Reinforced concrete walls. Outside railed iron fire-escapes, unusually wide.

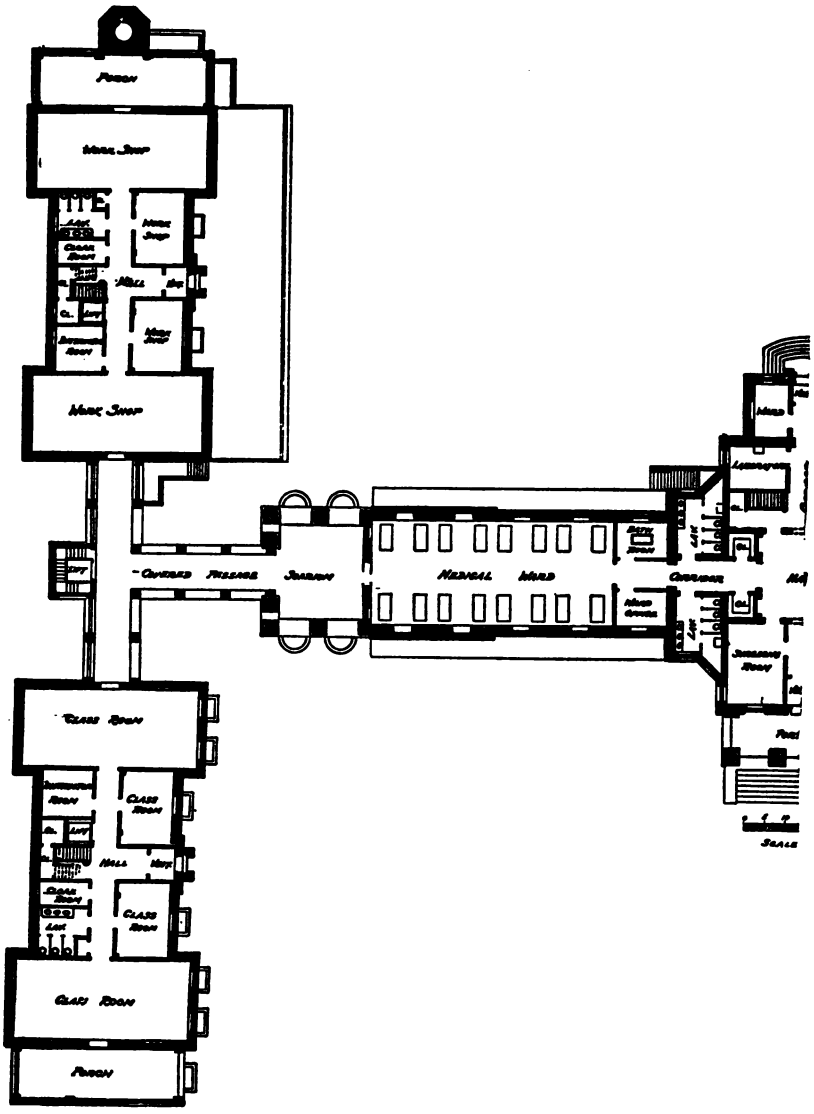
A summer home at Longport, New Jersey, has been recently built. It is a large bungalow in the shape of a hollow square with interior court and occupies a block of land on Atlantic Avenue, facing the ocean.

Admission: Four to ten years; preference to residents of Philadelphia first, then to those in the rest of Pennsylvania. Children must be permanently crippled, yet not absolutely helpless; no lung tuberculosis; no feeble-minded or backward children. Only those capable of becoming at least partially self-supporting are accepted. Parents or guardians must sign an indenture binding child over to the trustees of the institution until he shall reach his majority. Children are admitted in groups at widely separated intervals, in order to make as infrequent as possible the concentration of effort necessary to prevent danger of possible infection to the children already in the institution.

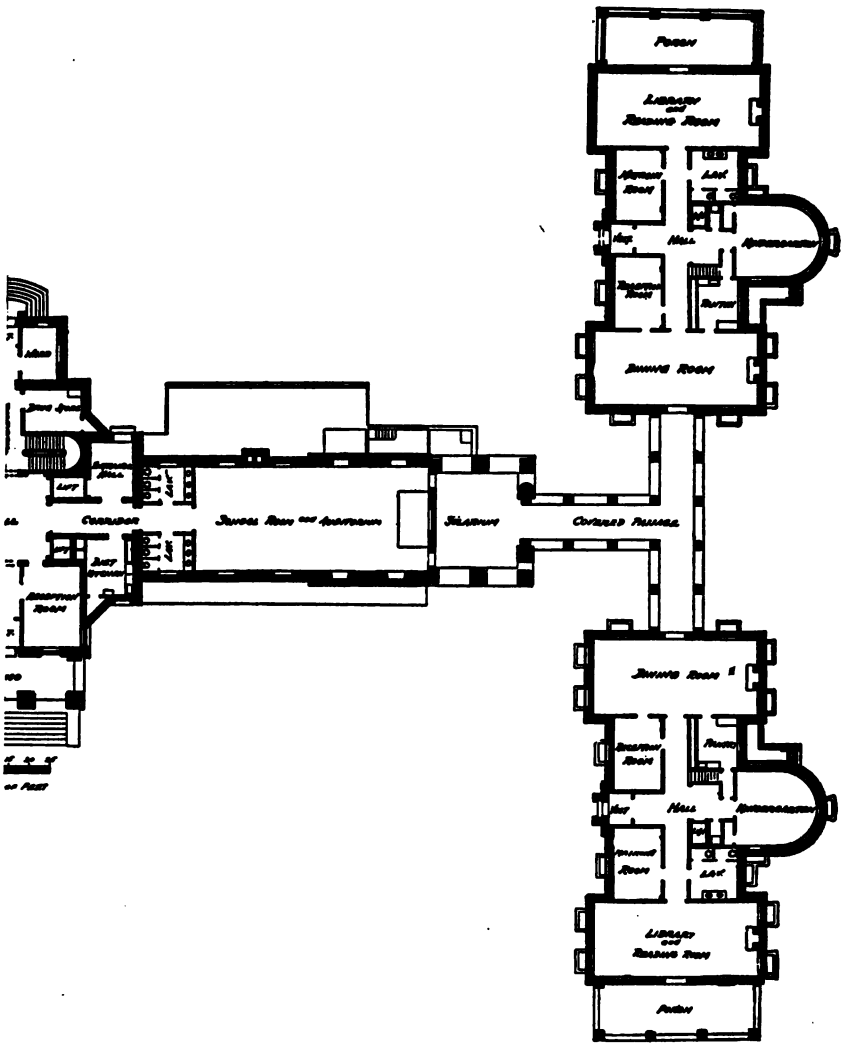
Discharge: After they reach the age of twenty-one, perhaps at eighteen, if ready to begin wage-earning.

Facilities for care of children: Visiting medical staff including orthopedic specialists; superintendent, head nurse, two other day nurses and one night nurse, all graduate nurses; day attendants, one for night duty; house father for boys' cottage; house mother for girls' cottage; night watchman. Wards with cross ventilation from many windows and adjoining solaria. Fully equipped gymnasium for special corrective gymnastics which are taught by expert instructor who is also in charge of that work at the University of Pennsylvania Hospital; spends seven and a half hours each week here. Thresholds absent. Elevator in main building large enough for a bed; also elevator in each of the two cottages for older children. Abundant space for all purposes, including sitting rooms and libraries in children's cottages. Outdoor playgrounds for tennis, baseball, and other games. Boarding home on grounds of institution planned for discharged children who are partially self-supporting. They will pay to the school for board such sums (not to exceed the cost) as they are able to pay from their earnings.

School: Kindergarten taught by non-resident hand work teacher. Graded school with two non-resident teachers. Forty special desks and seats and 57 adjustable as to height only. Curriculum and examinations cover standards set for public schools of Philadelphia.

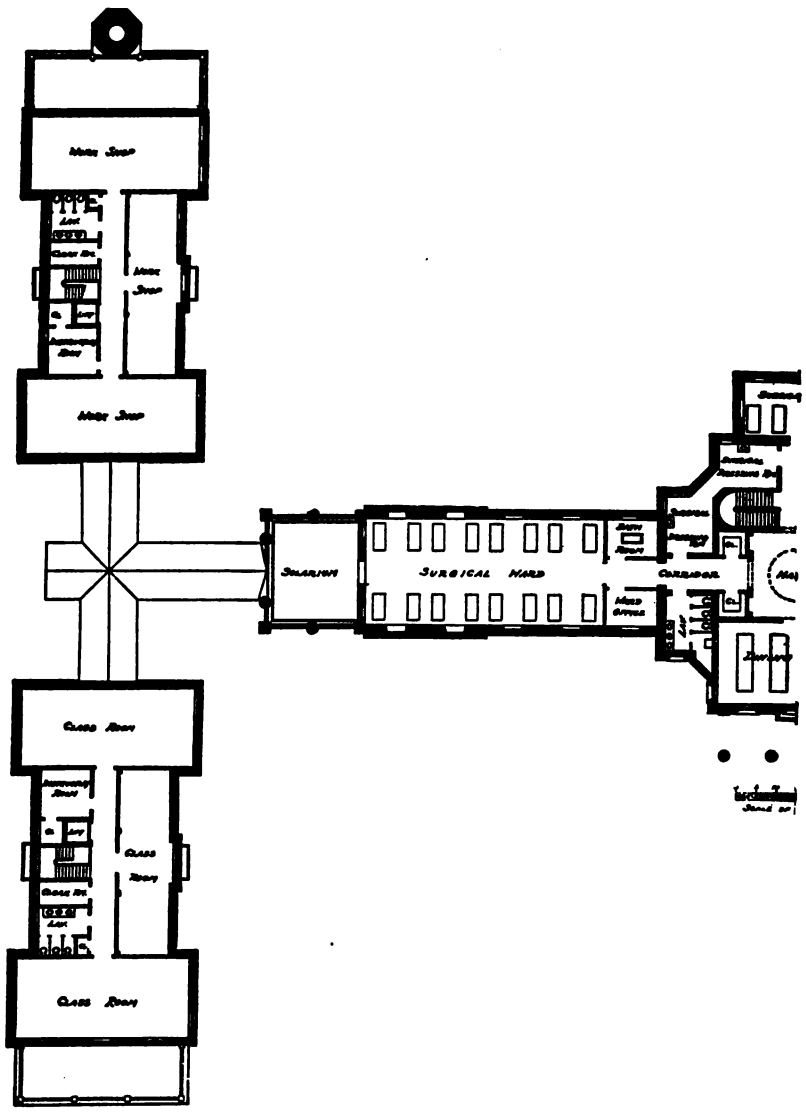


WIDENER MEMORIAL SCHOOL
First Floor Plan (South Half)
(See pages 16 and 17)

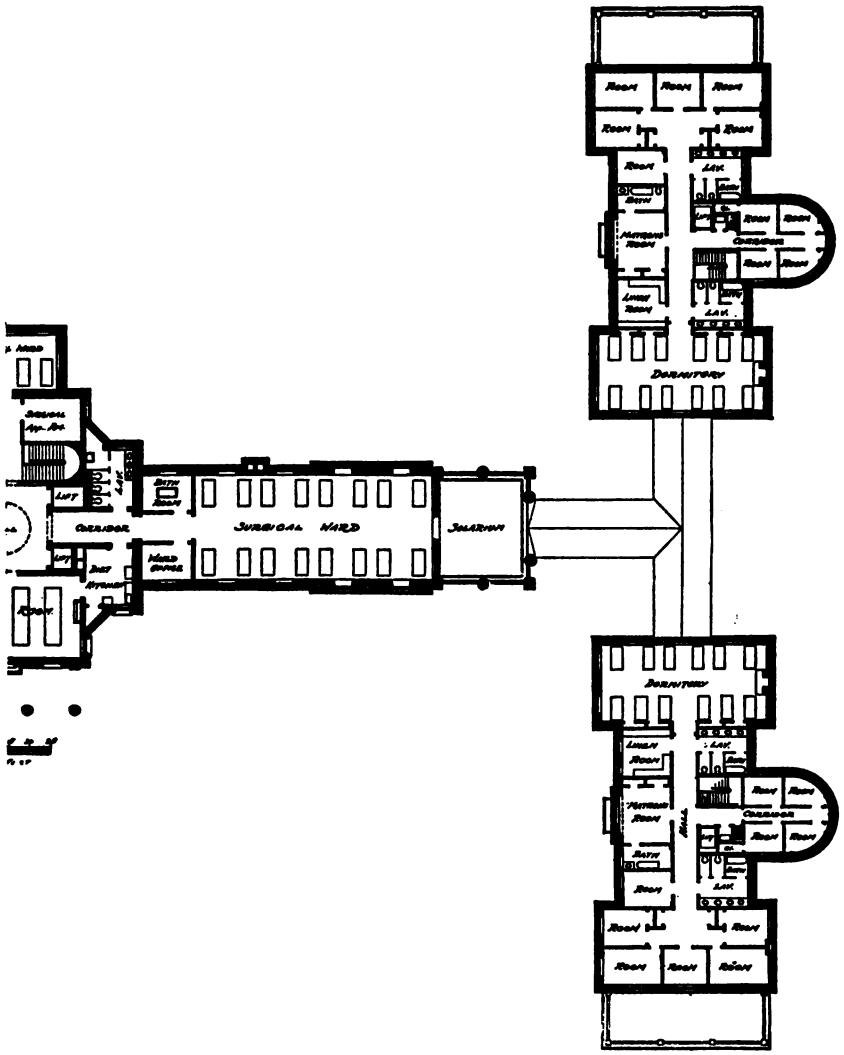


Horace Trumbauer, Architect

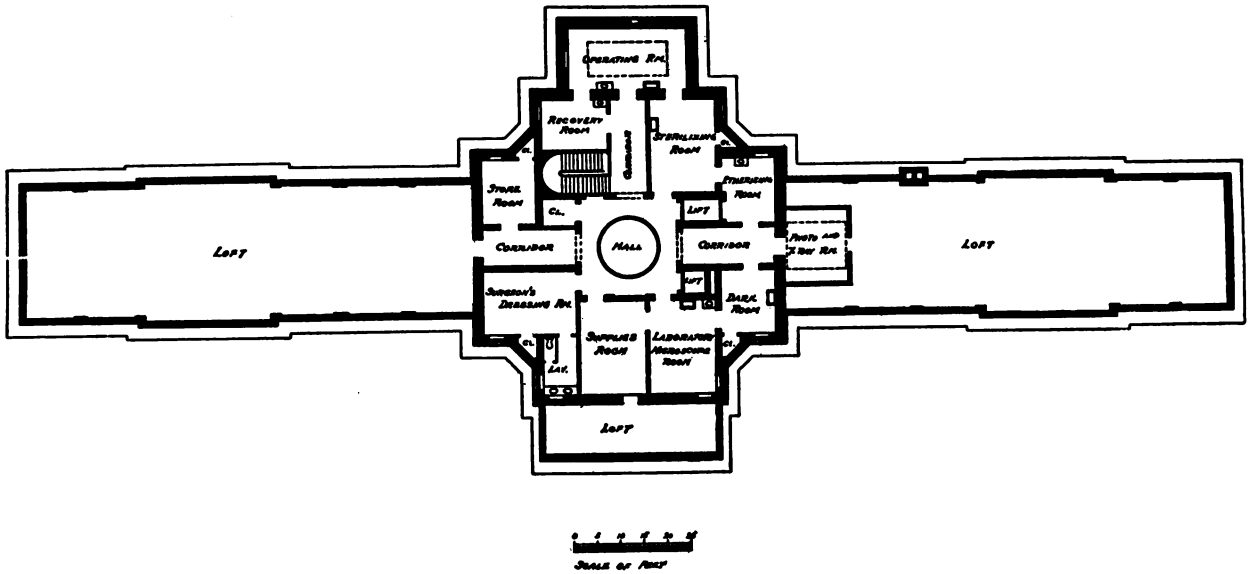
FOR CRIPPLED CHILDREN
First Floor Plan (North Half)
(See pages 16 and 17)



WIDENER MEMORIAL SCHOOL
Second Floor Plan (South Half)



FOR CRIPPLED CHILDREN
Second Floor Plan (North Half)



WIDENER MEMORIAL SCHOOL FOR CRIPPLED CHILDREN
Third Floor Plan

WIDENER MEMORIAL SCHOOL (Continued)

Hand work and vocational training: Sewing, cooking, elementary nursing and general work in wards, basketry, stenciling, chair-caning, burnt woodwork, manual training, practical carpentry, engraving, cobbling, stationary engineering, teaching, music. Special teachers are engaged whenever necessary; other employes also give vocational training informally in many directions. New subjects are undertaken as soon as any of the children are ready for them, and the range of choice will be practically unlimited.

Cost of property: $1,132,000, not including stable or cottages for engineer and gardener, or summer home at Longport.

Year's expenditure per capita: $1,115.

Comment: The Widener Memorial School was founded by Mr. P. A. B. Widener as a memorial to his wife and his eldest son. Since the loss of another son, Mr. George D. Widener, and a grandson, Henry Elkins Widener, by the sinking of the Titanic, Mr. Widener and other members of the family have regarded the institution, to which Mr. George D. Widener in particular had given close personal attention, more fully as a family memorial. The purpose of the founder has included the creation of a memorial whose architectural reserve and harmony of line make it an artistic contribution to the whole community. The large expenditure incurred in establishing so magnificent a plant and in providing so ample an endowment covers not only liberal provision for all phases of the care of 100 crippled children, but the maintenance of an institution which must always be considered as partly memorial in character. For this reason it is fairly comparable as to the size of the buildings, the cost of property or yearly expenses, with few if any of the other institutions studied. It has therefore been decided not to include such figures for this school, which have been kindly furnished in full, in the comparative tables, but to add them at the end of this general account of the institution. The school is maintained from the income of a trust of $4,000,000 created by Mr. P. A. B. Widener in May, 1912. Any surplus income unexpended will be added to the trust until it has reached $5,000,000. The trust will never exceed that amount, for further surplus income is to be expended for other charitable objects determined by the trustees, who are at present Mr. Widener, his son, and grandson. The charter grants power to increase the number of trustees, and it is planned to add in the near future persons outside

the family, prominent citizens who are interested in the development of work for crippled children.

TABLE H.—COST OF PLANT IN THE WIDENER MEMORIAL SCHOOL

	Cost
Lands	$400,000
Buildings (including heating apparatus and machinery)[a]	709,910
Surgical and gymnastic equipment	7,508
Furniture and educational equipment	14,109
Total	$1,131,527

[a] Not including stable or cottages for engineer and gardeners.

TABLE I.—CURRENT EXPENSES FOR ONE YEAR IN THE WIDENER MEMORIAL SCHOOL[a]

	Expense
Salaries and wages	$42,795
Provisions	32,605
Fuel and light	8,663[b]
Clothing and bedding	4,699
Repairs	2,126
Medical and surgical supplies	1,968
Miscellaneous expenses	2,016
Care of grounds	3,506
Shop expenses	8,663
Total	$107,041

[a] Figures for the year ending July 29, 1912. The average number of children in care in the year ending July 29, 1912, was 96.

[b] The equipment of the institution includes a power house.

TABLE J.—SQUARE FEET OF FLOOR SPACE PER CHILD IN THE WIDENER MEMORIAL SCHOOL

Floor space	Square feet per child
FOR CHILDREN	
Indoor	
Day and play rooms	6 [b]
Dormitories and wards	73
School rooms—general	34
School rooms—industrial	8 [c]
Dining rooms	33
Baths and toilets	24
Clothes rooms	1
Isolation rooms	28
Total	207
Outdoor	
Day and play rooms	24
Total	24
Total for children	231
FOR EMPLOYES [a]	
Sitting rooms	15
Dining rooms	13
Bed rooms	62
Baths and toilets	18
Total for officers	108
FOR GENERAL PURPOSES	
Offices and reception rooms	15
Kitchens	38
Laundry	33
Store rooms	107
Halls	115
Porches	28 [d]
Miscellaneous purposes	45
Total for general purposes	381
FOR SPECIAL PURPOSES	
Medical and surgical rooms	35
Gymnasium (corrective)	17
Brace shop	..
Total for special purposes	52
Total for all purposes	772 [e]

[a] It is to be noted that not all the employes sleep in the institution.

[b] Libraries used as day rooms.

[c] Vocational training also given in rooms used for other purposes.

[d] Not including covered passageways between buildings, 57 square feet per bed, or outdoor space for children.

[e] For corresponding figures, see Table II B, pp. 114–115.

PENNSYLVANIA

INDUSTRIAL HOME FOR CRIPPLED CHILDREN, Pittsburgh

Date of opening: 1902.

Superintendent: Rev. Lyman Mevis.

Orthopedic surgeon: James O. Wallace, M.D.

Class: Convalescent hospital and industrial school.

Average number of children: 45. Capacity: 50.

Plant: City lots 160 by 200 feet and 145 by 160 feet. Main building of brick, three stories; isolation and infirmary building of wood, one story. Walls painted, then varnished; floors bare wood in most rooms, cement in pavilions for outdoor sleeping, special composition in infirmary.

Admission: From three to twelve years; no rule as to color, but only white children yet taken; Pennsylvania children only. No lung tuberculosis; no feeble-minded; preference to those likely to profit by industrial training.

Discharge: No rule. Remain until benefited as much as possible, occasionally longer for purposes of education.

Facilities for care of children: Operations performed elsewhere, usually at Allegheny General Hospital or Children's Hospital. Visiting orthopedic surgeons; graduate nurse. Two pavilions connected with main building furnish equivalent of outdoor sleeping for 28 children—usually those with bone tuberculosis. Each child entering is kept two weeks in isolation building. In case of two kinds of infection this building can be divided into two parts, each with two small wards, nurses' room and bath; one diet kitchen. Masseuse comes every afternoon. Gymnastic exercises taught occasionally by stenographer. Children able to do so, often dance in school room after supper. Outdoor playgrounds. Large indoor play room, also exceptionally good library in another room. Thresholds very low or absent; two inclines at rear of building.

School: Grade teaching. Desks and seats adjustable as to height. Some children able to walk well are sent to public school in order to secure contact with children other than those in the institution.

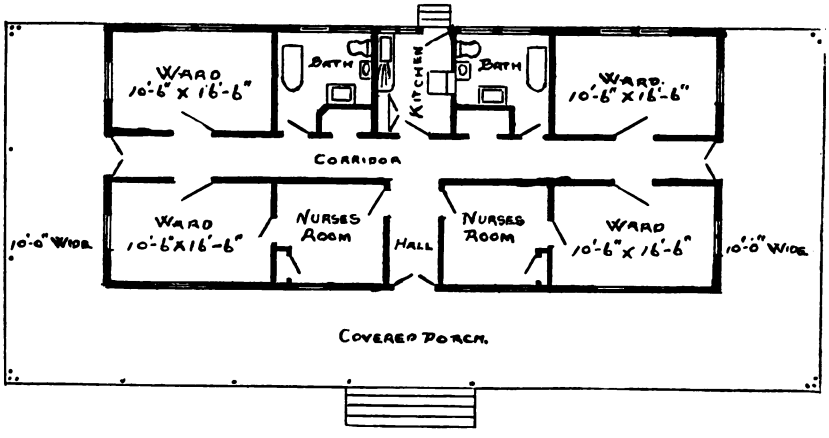
Hand work and vocational training: Sewing, basketry, manual training, furniture making, music. Music by grade teacher; other subjects by special non-resident teacher.

Cost of property: $110,000.

Year's expenditure per capita: $333.

Comment: All phases of work here are worth studying; the buildings are altogether adequate for care of convalescent cases and the

Sleeping Pavilions



Floor Plan, Surgical Building

INDUSTRIAL HOME FOR CRIPPLED CHILDREN, Pittsburgh, Pa. (See page 184)

PLAY PAVILION, SCHOOL HOUSE, AND GIRLS' HOUSE
Virginia T. Smith Home for Incurables, Newington, Conn. (See page 186)

CRIPPLED CHILDREN'S HOME, Buffalo, New York. (See page 191)

equipment is modern; two well constructed pavilions with 14 beds each for outdoor sleeping cost $2,900. Infirmary building well arranged. Educational and industrial work good. The spirit of the house is that of a well ordered and very happy home, with little suggestion of the fact that it is an institution.

PENNSYLVANIA

SEWICKLEY FRESH AIR HOME, Sewickley

Date of opening: 1897, as Fresh Air Home; since 1909 has done orthopedic work only and has been open throughout the year.

Superintendent: Miss Anna M. Flakenstein.

Orthopedic surgeon: James O. Wallace, M.D.

Class: Convalescent hospital.

Average number of children: 27. Capacity: 32.

Plant: 50 acres of land, of which 30 acres are woodland. Gardens supply large share of vegetables. Farmer lives on place in separate house. Main building of wood in style of a residence; separate small wooden cottage for several boys and caretaker used in summer. Fire-escape; tank and pumping station; hose ready to attach to spigots all over house. Painted walls, bare varnished floors.

Admission: From three to twelve years; no geographic restriction, but thus far all but one child from Pennsylvania; no lung tuberculosis; no markedly feeble-minded or epileptic.

Discharge: After benefited as much as possible.

Facilities for care of children: Operations performed at the Allegheny General Hospital; room here for surgical dressings; orthopedic surgeon pays weekly visits; superintendent and one other nurse are graduate nurses. Six double-decker beds and one ordinary bed for children are on a sleeping porch. Isolation in a small ward with bathroom near, no separate outside entrance. Very complete provision for amusement of the children. Indoor play room, much outdoor play space with tent, summer house, small merry-go-round, and swings. Thresholds absent.

School: Simple branches taught daily by visiting volunteer, in special outdoor school building.

Hand work and vocational training: Sewing, basketry, manual training; gardening taught by another visiting volunteer teacher.

Cost of property: $22,000.

Year's expenditure per capita: $391.

Comment: This small convalescent hospital has an excellent location and buildings which serve their purpose well. Outdoor sleep-

ing space for a still larger number of the children could be used to advantage. It is possible that in rare cases more complete isolation would be desirable than the present isolation ward affords. The dietary is especially good, with very liberal use of milk and eggs. Milk is served at every meal, in the middle of the afternoon and at night, before the children go to bed; they have fruit juice in the middle of the forenoon.

C. ASYLUM HOMES

Remark: Four asylum homes, the Darrach Home, House of the Annunciation, and the New York Home for Destitute Crippled Children in New York City, and the Home of the Merciful Saviour in Philadelphia, have summer homes, which are excluded from the figures for cost of plant, in order that they may be comparable with other institutions in the group. The current expense figures of these four institutions include the cost of operating the summer homes, as the main institutions are closed for the summer.

CONNECTICUT

VIRGINIA T. SMITH HOME FOR INCURABLES, Newington
(Maintained by the Children's Aid Society of Connecticut)

Date of opening: 1896.

Secretary of Children's Aid Society: Miss Josephine Griswold, 60–61 Brown-Thomson Building, Hartford, Connecticut.

Orthopedic surgeon: J. E. Root, M.D.

Class: Asylum home.

Average number of children: 87. Capacity: 100.

Plant: 65 acres, of which 40 are cultivated. Farmer lives in original farm house. Other buildings (all wooden): girls' house; boys' house; school house; isolation building. Paint and plaster walls; bare floors.

Admission: Not under two years; no lung tuberculosis; plan to take no feeble-minded cases. Practically all children from Connecticut. Colored children taken.

Discharge: No limit to stay. Many improved children have been sent home; a small number have been placed in family homes.

Facilities for care of children: Children sent to hospitals in Hartford for major operations; minor operations and dressings done at home by visiting physicians. One experienced (not graduate) nurse. Isolation in separate building. Preliminary visits to homes and after care through agents of Connecticut Children's Aid Society.

Some of the children go in summer to "Playridge," a summer home for dependent children at the seashore maintained by Children's Aid Society. Thresholds low or absent. Incline to school house entrance. Elevator in boys' cottage.

School: Two teachers; separate school building. Full eight grade course; unusually close resemblance to school for well children. Non-adjustable desks.

Hand work and vocational training: Simple housework, manual training, gardening, music.

Cost of property: $56,000.

Year's expenditure per capita: $213.

Comment: Custodial care on the cottage plan is provided for cripples of all kinds. Unrestricted outdoor play space; woods; hills. A few incurable adults still remain, but it is not planned to take others or to admit feeble-minded cases in future.

ILLINOIS

"HAPPY HAVEN," 3445 Vernon Avenue, Chicago

Date of opening: 1908.

Superintendent: Miss Florence E. Prouty.

Orthopedic surgeon: None.

Class: Asylum home.

Average number of children: 6. Capacity: 6.

Plant: A city apartment on the first floor with a small rear porch and a back yard. The children go for the summer to a camp for crippled children at Twin Lakes, Indiana.

Admission: Must be of school age and able to attend special public school classes for cripples; no lung tuberculosis. No other restrictions; both boys and girls, white and colored.

Discharge: Stay as long as they need a home.

Facilities for care of children: Very simple. Children sent to a hospital if necessary. Miss Prouty consulted an orthopedic surgeon to learn elementary points in the physical care of children.

School: All children are taken by bus to special classes for cripples at Fallon School (public).

Hand work and vocational training: Nothing except simple housework.

Cost of property: None.

Year's expenditure per capita: All expenses met by Miss Prouty, with slight aid as to clothing from South Side Crippled Children's Aid Society.

Comment: Miss Prouty has been a teacher of crippled children in the public schools of Chicago for about twelve years. She has taken six crippled children into her own home because in each case the child was left in need of a home through the death of parents or other disaster. In most cases Miss Prouty has believed the children not eligible to any existing institution. She takes the children with her to school and they have hot dinners there on school days. All other meals are prepared by Miss Prouty, with a little help from the children. The only outside assistance comes from the weekly visits of a scrubwoman.

SUMMER HOME, Twin Lakes, Indiana

For several summers, beginning in 1909, Miss Florence Prouty of "Happy Haven" has taken the five or six children for whom she was caring and as many more as possible, to spend several weeks in the country. Crippled children are referred to this camp by residents of Hull House. Two police officers from Chicago are sent along by the city, to give such assistance as is needed in lifting the children about. In the summer of 1910, 42 children lived in seven tents at Twin Lakes, Indiana. Since then a rough pavilion has been completed, in which most of the children sleep. It has partial partitions giving the effect of several rooms, but not interfering with the circulation of air. A farmer has agreed to the permanent rental of this acre of land for the nominal charge of $1.00 per year.

Miss Prouty and several mothers of the children have prepared the meals. They hope to have money enough in future seasons to hire a cook. One older person, usually the mother of one of the children, sleeps in each tent.

ILLINOIS

HOME FOR DISABLED CHILDREN, 902 South Eighth Avenue, Maywood

Date of opening: 1909.

Superintendent: Martha M. Crofut, M.D.

Asylum home: Maintained by Children's Home and Aid Society of Illinois.

Average number of children: 11. Capacity: 12.

Plant: A substantial residence set in beautiful grounds, 262 by 294 feet.

Admission: Limited to cases not requiring surgical care, but disabled permanently or for a long time. No lung tuberculosis, no feeble-minded, deaf or blind.

Discharge: After children no longer need the special care offered.

Facilities for care of children: Superintendent a physician; home within three-quarters of an hour by train from Chicago; cases needing surgical attention taken to Home for Destitute Crippled Children in Chicago. Especially large outdoor play space; sand pile.

School: In institution (ungraded) conducted by armless teacher; simple branches.

Hand work and vocational training: None, except simple housework.

Cost of property: $11,400.

Year's expenditure per capita: $305.

Comment: A place less institutional can not be imagined. The life is like that in any pleasant home. It is planned that not more than a dozen children shall ever live in the house. If there are more cases needing care it is hoped that other small cottages, probably of fireproof construction, can be built within the large grounds upon which the present house stands.

MASSACHUSETTS

New England Peabody Home for Crippled Children, Hyde Park

Date of opening: 1894.

Superintendent: Miss Clara M. Thurston.

Orthopedic surgeon: Robert W. Lovett, M.D.

Class: Asylum home with some provision for convalescent care.

Average number of children: 30. Capacity: 30.

Plant: Suburban property. Wooden building resembles large residence. Very careful provision for escape in case of fire; well of brick from top floor to ground contains wooden stairway with iron hand rail, entered from each floor, exit directly out of doors. Linoleum used to cover many floors.

Admission: Not over twelve years; New England children. No lung tuberculosis; no feeble-minded.

Discharge: After benefited as much as possible, or after able to be self-supporting, if they have not good homes to which they may return.

Facilities for care of children: Most operations at the Children's Hospital, Boston; minor operations and dressings at home by visiting surgeon; graduate nurse; isolation ward with three beds and bath on third floor can be reached by fire-escape well. Seventeen beds in outdoor sleeping rooms or porches.

School: Grade classes. Adjustable desks.

Hand work and vocational training: Sewing, cooking, simple housework, basketry, chair-caning, manual training. Special teacher.

Cost of property: $37,000.

Year's expenditure per capita: $342.

Comment: Excellent combination of good physical care, even for cases requiring considerable medical attention, with a very pleasant home life. Play room with open fire furnishes social center; only defect is fact that this room, like the sun parlor, gets no sun for a considerable part of the day. Interesting effort to keep children long enough to give them real help. Parents are required to sign agreement to leave child in the home for at least two years. This is not legally binding but it has a decided moral effect.

NEW JERSEY

Daisy Fields Home and Hospital for Crippled Children, Englewood

Date of opening: 1893.

Superintendent: Miss Angeline L. Staples.

Orthopedic surgeon: Henry Ling Taylor, M.D.

Asylum home: With facilities for convalescent hospital care.

Average number of children: 18. Capacity: 18.

Plant: Wooden residence with three floors; steam heat; gas; unguarded windows for ventilation; outside wooden stairway; extinguishers; painted walls; maple floors in dormitories and bathrooms. Gates at head of stairs on each level to prevent accident. No children's rooms above second floor.

Admission: Between three and ten years. Only curable cases, able to walk; no feeble-minded; no tuberculosis of the lungs.

Discharge: Boys leave at fourteen; girls stay until benefited as much as possible, longer if they need a home.

Facilities for care of children: Superintendent is a graduate nurse; children sent to Post-Graduate Hospital in New York if they need surgical attention; play house; large outdoor space. Isolation in two rooms which can be shut off from rest of house, with fire-escape for direct entrance from outside. Superintendent's bathroom can be used by isolated persons.

School: In institution; simple branches only.

Hand work and vocational training: Gardening and simple housework.

Cost of property: $15,000.

Year's expenditure per capita: $431.

Comment: The most noticeable feature is the combination of the small numbers and long period of residence which make the place much like a family home, with adequate physical supervision for

children who are not bed cases but who still need to be carefully watched. There is much closer attention to strictly medical care than in most asylum homes, and the institution could, in that respect, be classed with the convalescent hospitals. The atmosphere is most cheerful and the children seem very contented.

NEW YORK

CRIPPLED CHILDREN'S HOME, 487 Niagara Street, Buffalo

Date of opening: 1910.

Superintendent: Mrs. Elizabeth Saylor.

Orthopedic surgeons: (Attending) Prescott Le Breton, M.D., Ward Plummer, M.D.

Class: Asylum home.

Average number of children: 22. Capacity: 35.

Plant: Wooden residence, somewhat altered to fit special needs of the institution. Still further provision of baths and toilets needed. Satisfactory fire-escape; extinguishers; bare floors; thresholds absent. Good barn at rear of property could be used for school building.

Admission: Up to about sixteen years; no lung tuberculosis; no epileptics or markedly feeble-minded. Colored children taken.

Discharge: After being benefited as much as possible, longer if they need a home.

Facilities for care of children: Matron is experienced in care of children and a practical nurse; visiting physicians; no operations. No special isolation ward, but children are isolated in one of the wards for two weeks after admission. Visiting committee goes to homes, also co-operates with other agencies.

School: None.

Hand work and vocational training: Sewing, advanced kindergarten work by volunteer teachers.

Cost of property: $21,000.

Year's expenditure per capita: $184.

Comment: The pleasantly homelike atmosphere results in part from the matron's personality, but also in large measure from the earnest and sympathetic interest of the women officers who keep in close personal touch with all phases of the work.

NEW YORK

DARRACH HOME FOR CRIPPLED CHILDREN, 118 West 104th Street, New York City

Date of opening: 1899.

Superintendent: Mrs. J. K. Mott.
Orthopedic surgeon: Arthur H. Cilley, M.D.
Class: Asylum home.
Average number of children: 18. Capacity: 20.
Plant: City house of brownstone; no front yard; very small back yard. Children play on uncovered roof over rear extension of building. Summer home at Pelham Bay Park, New York.
Admission: From three to twelve years; no lung tuberculosis; no bed patients or helpless cases; none requiring close medical or physical attention.
Discharge: Remain as long as they need a home.
Facilities for care of children: Matron a housemother without nurse's training. A physician, general practitioner, examines each child before admission to be sure there is no infectious disease. He examines all children upon their return from summer home in the fall; orthopedic surgeon sees children if necessary. A maid's room on top floor where no children sleep would be used for isolation if necessary; separate outside entrance possible by using fire-escape. Enclosed elevator.
School: None.
Hand work and vocational training: Simple housework; sewing taught by teacher sent one afternoon each week for an hour by People's University Extension Society.
Cost of property: $30,500.
Year's expenditure per capita: $218.
Comment: This is primarily a home for children requiring little surgical attention. The atmosphere is genuinely homelike and the children seem very happy in spite of the small opportunity for outdoor life. They are much refreshed by their long season in the country, and one wonders if it would not be better to keep them in the country all of the year if that could be made practicable.

SUMMER HOME, Pelham Bay Park, New York

The children from the Darrach Home are housed for the summer in an old residence provided by the City of New York.

It would be hard to find a more ideal location. The house overlooks Pelham Bay, and the occupants have a good private bathing beach. The children go in bathing every day, and many of them are able to swim. There is heavily wooded vacant space about the house.

The building is of wood and stone. Since extensive repairs in the summer of 1911 it is in good condition. The floors are bare;

the plumbing is good, with bathroom for boys on the first floor and for girls on the second floor (used also by the officers and maids).

At the time the institution was visited there were 18 children—nine boys and nine girls. There is abundant room for a larger number.

One boy, eighteen years of age, who is employed in the city, has been commuting from the Adee House this summer. He now earns $20 a week at some mechanical profession.

There is a matron, assistant matron, a cook, and a laundress.

For two hours each afternoon during the summer a sort of school session is held. The older children teach the younger children in three groups.

The children do some domestic work. They take care of their own sleeping rooms, but have nothing to do with the kitchen. The children have weeded and finally brought to the house the vegetables which they have grown.

At the time the institution was visited the older boys were playing a spirited game of baseball with two ablebodied youngsters.

NEW YORK

HOUSE OF THE ANNUNCIATION FOR CRIPPLED AND INCURABLE CHILDREN, Broadway and 156th Street, New York City

Date of opening: 1892.

Superintendent: The Mother Superior of the Sisters of the Annunciation.

Orthopedic surgeon: T. Halsted Myers, M.D. (Consulting.)

Class: Asylum home.

Average number of children: 30. Capacity: 30.

Plant: Brick building on lot 100 by 100 feet. Thoroughly modern in finish and equipment. Careful precautions against fire; walls and partitions of brick; steel girders; wood trim covered with metal in parts of house most used by children; wire glass in doors; electric gongs; good outside stairway for escape. House telephone system. Tile and wood floors; walls of hard plaster, some painted, some calcimined. Slate treads on stairs. Unusually complete and well planned system of closets. Summer home at Wilton, Connecticut, with good buildings.

Admission: White girls only; four to sixteen years; no long-time bed cases; no meningitis, lung tuberculosis, epilepsy, St. Vitus' dance, or syphilis.

Discharge: Remain as long as they need a home. Many of the chil-

dren stay in the home for a long time, and the number admitted each year is very small.

Facilities for care of children: Operations at St. Luke's Hospital. Consulting orthopedic surgeon and visiting physician. The children do not have individual clothing except as parents furnish it, but they do not wear uniforms. They have no bureaus but have individual space in the bathrooms for their toilet articles. Some Sisters sleep within reach of dormitories. Thresholds absent, or very low; stairs have very wide, easy rises and two platforms between first and second story. Chapel chairs for children are of different heights. Gallery for those unable to walk, to which wheeled chairs can be conveniently moved. No elevator, but dumb-waiter is so large and strong that it is sometimes used for moving children. Isolation ward with two beds.

School: Academic work is given for an hour daily by one of the Sisters, in addition to religious instruction.

Hand work and vocational training: Sewing, basketry, advanced kindergarten work, music taught by teachers from People's University Extension Society.

Cost of property: $156,000.

Year's expenditure per capita: $214.

Comment: This is the Mother House of the Sisters of the Annunciation, B. V. M., as well as a home for the crippled and incurable children in their charge. The dormitories with their immaculate beds, glass-topped tables, and white screens, resemble small wards in a hospital, although hospital care is not offered. There is a good library of children's books. All the rooms have copies of famous religious paintings, and the reception room and the Sisters' sitting room have beautiful pictures of considerable value, including two original Italian paintings.

SUMMER HOME, Wilton, Connecticut

(Opened at Stamford, Connecticut, in 1895)

The surgical work is under Dr. Myers, of Saint Luke's Hospital. The county physician has agreed to serve them if necessary while they are in Connecticut, but there has been no illness.

The most notable point concerning the cases received is the fact that paralyzed and feeble-minded children are received readily, as well as those who have only tuberculous bone troubles. The report for the year ending September 30, 1909, shows eight cases of paralysis out of 19 patients. Dr. Myers, the orthopedic surgeon summarizes each case. He specifically mentions poor mental

development on the part of five out of the 23 children treated during the year. There were 28 children present at the time the home was visited; capacity 30.

The summer home is located on a tract of 16 acres.

The former residence has been finished as a home for the Sisters. The old garage was moved up to the house and transformed into a chapel. An excellent modern building for the use of the children has been erected. The Mother Superior, who founded the institution, supervised every detail of the construction and remodeling. The whole plant reflects her careful planning. The floors are all of hardwood—polished oak or hard pine. There are no thresholds in this building except at the outside doors. A small, steep incline is built at the rear of the house. It is meant for the use of wheel chairs. An attic playroom and a large porch give play space.

There are three dormitories of 10 beds each. The rooms are absolutely bare except for the beds, which are of white enamel.

A tiny cottage of two rooms at some distance to the rear of the other buildings is intended for the use of clergy or other visitors. It would make an excellent isolation cottage in case of need.

The three tables in the children's dining room are covered with oilcloth. The children's dishes are of granite ware.

All the children who are able to do so help in the light housework. A few girls have learned to cook by staying after most of the children leave in the fall, or by coming in advance of the others in the spring.

There is no formal teaching from books during the summer. Someone comes to teach them songs. A Sister helps them with mending, embroidery, basket making, and bead work. A number of these children are mentally defective and some are too young to do useful hand work.

Apparently, little effort is made to fit the children to earn their own living independently.

NEW YORK

NEW YORK HOME FOR DESTITUTE CRIPPLED CHILDREN, 141 West 61st Street, New York City

Date of opening: 1904.

Superintendent: Mrs. McCarthy.

Orthopedic surgeon: (visiting physician) Egerton S. Jackson, M.D.

Class: Asylum home.

Average number of children: 20. Capacity: 25.

Plant: City house of brownstone. No outdoor play space. Iron fire-escape. Reception rooms are fully furnished, but for sanitary reasons rooms used by children have less furniture, bare floors with rugs, and painted walls. Summer home with good wooden house at Patchogue, New York.

Admission: Three to fourteen years; cases not requiring surgical care or nursing. No lung tuberculosis; no feeble-minded.

Discharge: After a home is no longer needed, usually when not over seventeen years. Officers help those who leave to find employment.

Facilities for care of children: Operations usually at Hospital for the Ruptured and Crippled; consulting orthopedic surgeons and visiting house physicians. Simple gymnastic exercises by teacher from People's University Extension Society. One small ward, without bath, for isolation. Rubber treads on stairs.

School: None.

Hand work and vocational training: Sewing, simple housework.

Cost of property: $21,500.

Year's expenditure per capita: $207.

Comment: This home was transferred to the Children's Aid Society of New York in the spring of 1913 and will be used as a receiving shelter for well children whom they plan to place in family homes. The work for cripples will be continued by the society at its day school for crippled children, the Rhinelander School in East 81st Street. When the transfer was made 18 of the 19 crippled children in the New York home were placed with relatives within a month, by agents of the Children's Aid Society. The home has been included in this study because its work continued through most of the time during which this study was in progress. It was a pleasant home, with a very friendly atmosphere.

SUMMER HOME, Patchogue, New York

This summer home was opened in 1908, in a former residence located on about two acres of ground. A small fresh-water lake lies a few yards beyond the boundary.

The majority of the children move about with very nearly the facility of perfectly sound children. There are none who stay in bed; none with abscesses. Most of them come to this home from the Hospital for the Ruptured and Crippled where all surgical work for the home is done.

The home accommodates 18 children. A few more could be taken by crowding in additional beds.

Most of the children sleep in a large dormitory on the second floor. Four of the older boys have a separate room. There is also a separate room for the older girls.

There are only two maids at the country home. All the laundry work is sent out. The children eat at two long tables covered with white oilcloth. They use porcelain dishes, but enameled cups. There is no uniformity in the children's dress.

No school work of any sort is maintained. The children do a little domestic work.

OHIO

HOLY CROSS HOUSE, 5609 Whittier Avenue, Cleveland

Date of opening: 1903.

Sister-in-charge: Sister Edith Constance, C. T.

Orthopedic surgeons: S. W. Kelley, M.D., Gordon Morrill, M.D.

Class: Asylum home.

Average number of children: 18. Capacity: 20.

Plant: Two old residences, connected, on land 80 by 180 feet. About two-thirds of the land is used as a playground. Painted walls and floors. No special precautions against fire. More bathroom facilities desirable.

Admission: Preference to Cleveland children, but others have been taken; no lung tuberculosis; none known to be feeble-minded; none requiring special diets.

Discharge: No limit as to stay; remain as long as they need a home.

Facilities for care of children: Operations at St. Luke's Hospital; visiting surgeon and physician. Matron and one nurse are graduate nurses. Thresholds absent. Incline to back yard (playground).

School: Maintained by city board of education in old barn at rear of property. Grade class work and simple kindergarten processes by same teacher. Desks adjustable as to height.

Hand work and vocational training: Simple housework.

Cost of property: $11,600.

Year's expenditure per capita: $282.

Comment: This is a cheerful, homelike place, where the children seem very happy. The buildings are inferior but the interior of the house is kept clean and cheerful. The management of the house has recently been placed in the hands of the Sisters of the Community of the Transfiguration, and it has been made a diocesan institution of the Episcopal Church. Since the affiliation with St.

Luke's Hospital, it is believed that convalescent cases will be taken requiring more medical and surgical attention than was necessary for the chronic or incurable cases.

PENNSYLVANIA

CHILDREN'S HOUSE OF THE HOME FOR INCURABLES, South 48th Street and Gray's Ferry Road, Philadelphia

Date of opening: 1877.

Superintendent: Miss Jane R. Kelly.

Orthopedic surgeon: John Speese, M.D.

Class: Asylum home.

Average number of children: 26. Capacity: 33.

Plant: Modern connected buildings on grounds of large institution for adults. Boys' house fireproof; second stairway enclosed; extinguishers; occasional fire drills; alarm. Bare floors, painted walls.

Admission: Not over twelve years; all kinds of incurable crippled children; no lung tuberculosis; no feeble-minded or epileptics. Preference to Philadelphia cases, then to those from other parts of Pennsylvania.

Discharge: Cases are transferred to adult department at various ages. A very few cases have improved unexpectedly and been sent to their own homes, and one case to the Widener Memorial School.

Facilities for the care of children: Operations at hospitals; most cases do not require close surgical supervision. Night nurse maid. Each child has a small room of his or her own, most of them on first floor level. Cork carpets in halls; thresholds absent. Covered corridor to play house. One room for isolation.

School: Grade work. Some non-adjustable desks. Some children in wheel chairs.

Hand work and vocational training: Sewing and manual training. Visiting teacher.

Cost of property: $90,400.

Year's expenditure per capita: $395.

Comment: This is the only home exclusively for incurable crippled children in America. It fills a pressing need in Philadelphia and is an example of the type of small institution needed for incurable cases in every section. Special care is taken to conserve the individuality of the children through separate rooms and individual possessions of every sort. This is especially important since the

children stay permanently. The atmosphere is thoroughly cheerful.

PENNSYLVANIA

HOME OF THE MERCIFUL SAVIOUR FOR CRIPPLED CHILDREN, 4400 Baltimore Avenue, Philadelphia

Date of opening: 1882.

Superintendent: Miss Rosanna Pattee.

Orthopedic surgeon: Charles H. Frazier, M.D. Assistant: Frank Dickson, M.D.

Class: Asylum home.

Average number of children: 50. Capacity: 50.

Plant: About 15 acres of land; a group of connected stone buildings with central heating plant; girls' house; boys' house; surgical building; school building; chapel. Painted walls; floors bare or covered with linoleum. Tile in bathrooms. Alarm; iron fire-escape. Summer home at Avon-by-the-Sea.

Admission: From two and a half to six years; preference to Pennsylvania children; no lung tuberculosis; no feeble-minded.

Discharge: Girls stay as long as they need a home. Incurable boys have been transferred to institutions for adults at about sixteen.

Facilities for care of children: Operating room for minor operations; major operations at University Hospital. One graduate nurse, who sleeps in room opposite ward used by children needing closest attention. One other attendant trained for one year at a children's hospital. Bed cases moved into sun parlor from ward for the day. Diet kitchen. In most cases only two or three children in each sleeping room. Thresholds absent. Incline, to back yard. Rubber floor covering in center of surgical ward and some halls. Elevator. Two rooms and bath for isolation.

School: Grade classes. Non-adjustable desks.

Hand work and vocational training: Sewing and simple housework. Officers have helped older children to find positions.

Cost of property: $97,000.

Year's expenditure per capita: $326.

Comment: A pleasant home with strong religious influences. The abundant space would permit care of larger number, but homelike atmosphere would doubtless be less striking if number were increased.

SUMMER HOME, Avon-by-the-Sea, New Jersey

Date of opening: 1888.

The summer home is a large wooden building with a full height basement, three stories, and an attic which could be used for sleeping purposes. It stands among pine trees and has vacant space in the rear. It has the largest porches seen on any summer home for crippled children.

In spite of this porch space none of the children sleep outdoors. There are several beds at one end of the second-story porch, used during the day by the few children who must stay in bed. The interior is simply but comfortably furnished. Three large rooms on the first floor are used for general sitting room, a boys' play room, and a play room and sewing room for the girls. In the dining room are several small tables with white tablecloths and porcelain dishes for the older children. The tables for the smaller children are covered with oilcloth and furnished with enameled dishes.

The most noticeable feature here as at the city plant is that the children sleep in small rooms with one or two beds and have abundant provision for their personal belongings.

The floors are of hardwood, with no covering. The walls are of painted plaster. There are no fire-escapes, but the extensive porches would make it very easy to remove the children from the building in case of fire.

PENNSYLVANIA

HOUSE OF ST. MICHAEL AND ALL ANGELS, North 43rd and Wallace Streets, Philadelphia

(Under the Sisters of St. Margaret)

Date of opening: 1887.

Superintendent: The Sister in charge.

Orthopedic surgeon: Walter G. Elmer, M.D.

Class: Asylum home.

Average number of children: 25. Capacity: 30.

Plant: Wooden residence with good back yard. Bare floors; painted walls in rooms used by children. Summer home at Sea Isle City, New Jersey.

Admission: Colored children only; not under two years; no lung tuberculosis; no feeble-minded.

Discharge: Boys at ten; girls usually about eighteen.

Facilities for care of children: Operations performed at University Hospital by one of the orthopedic surgeons there, who is the surgeon for this home. Small ward kept as infirmary; bath near. Fire-escape could be used as separate outside entrance. Sun room over

porch used by smallest children during the day in winter; large back yard provides play space in summer; part of it covered.

School: None. Sometimes two or three children unable to go to public school have been taught by one of the Sisters.

Hand work and vocational training: Sewing and complete course in housekeeping for girls.

Cost of property: $13,600.

Year's expenditure per capita: $189.

Comment: This is the only institution exclusively for colored crippled children in America. Similar places providing care for longer time than a hospital can offer are much needed in other communities where there is a large Negro population.

The building and equipment are very simple, but the interior is kept up to the hospital standard of cleanliness, and the atmosphere is very cheerful.

SUMMER HOME, Sea Isle City, New Jersey

In 1911 the trustees purchased a house and grounds for a summer home at Sea Isle City, Cape May, at a cost of $3,000, and expended $1,200 additional, making a total of $4,200.

The summer home is a commodious building with large porches. The building is large enough to accommodate the entire population of the house in Philadelphia which is closed during the summer months.

APPENDIX

APPENDIX

DESCRIPTIONS OF INSTITUTIONS NOT INCLUDED IN THE TABULATED LIST

Supplemented by List of Occupations of Graduates of Industrial School for Crippled and Deformed Children, Boston, Massachusetts

Name of Institution	Reasons for not Listing
HOSPITAL	
MASSACHUSETTS	
Boston	
Children's Hospital	A general hospital for children (about one-fourth orthopedic cases)
NEW YORK	
Randall's Island	
New York City Children's Hospital (Department of Public Charities)	A general hospital for children (orthopedic wards only)
New York City	
Seton Hospital (Nazareth Branch for Women and Children)	Tuberculosis hospital (about 15 per cent crippled children)
PENNSYLVANIA	
Philadelphia	
Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases	(About one-third orthopedic cases)
WISCONSIN	
Milwaukee	
Children's Free Hospital	A general hospital for children (about one-third orthopedic cases)
CONVALESCENT HOSPITALS OR HOMES	
MASSACHUSETTS	
Wellesley Hills	
Convalescent Home of the (Boston) Children's Hospital	A general convalescent home (about one-third crippled children)

Name of Institution	Reasons for not Listing
NEW JERSEY	
Atlantic City	
Children's Sea-Shore House	A general convalescent home (about one-fifth crippled children)
NEW YORK	
Chappaqua	
Convalescent Children's Home of the New York Children's Aid Society	A general convalescent home (about one-third crippled children)
Rochester	
Country Convalescent Hospital	A strictly private institution. Owner preferred not to furnish statistical information
White Plains	
St. Agnes Hospital for Crippled and Atypical Children	Receives mentally deficient and crippled children (about 75 beds for cripples). Sisters preferred not to furnish statistical data; 128 orthopedic cases in 1910
OHIO	
Cleveland	
Rainbow Cottage (affiliated with Lakeside Hospital)	A general convalescent home (about one-half crippled children)
ASYLUM HOMES	
NEW YORK	
New York City	
House of the Holy Comforter for Incurables	Receives women and children (about one-fifth cripples)
PENNSYLVANIA	
Allentown	
Good Shepherd Home for Crippled Orphans	Receives cripples, infants, dependent children and old people (about one-third cripples)
SUMMER HOMES	
NEW JERSEY	
Westfield	
Children's Country Home	Summer care only
NEW YORK	
Arverne	
Seaside Home for Crippled Children	Summer care only

Name of Institution	Reasons for not Listing
Hawthorne	
Blythedale (Convalescent Home for Tuberculous Crippled Children)	Summer institution, when visited. Since opened all the year round
Bath Beach	
Haxtun Cottage at the Children's Summer Home of the New York Children's Aid Society	Summer care only
Sheepshead Bay	
Summer Home for Crippled Children	Summer care only
Southampton	
Summer Home for Crippled Children (maintained by the Post-Graduate Hospital, New York City)	Summer care only
Tarrytown-on-the-Hudson	
Robin's Nest	Summer care only
RHODE ISLAND	
North Kingston	
Crawford Allen Memorial Hospital (Branch of Rhode Island Hospital)	Summer care only

DAY SCHOOLS

MASSACHUSETTS	
Boston	
Industrial School for Crippled and Deformed Children	Day care only, without board
NEW YORK	
New York City	
Crippled Children's East Side Free School	Day care only, without board
Miss Spence's School Society	Day care only, without board
Rhinelander Industrial School for Crippled Children	Day care only, without board

Name of Institution	Reasons for not Listing
Trade School of the Hospital of Hope for the Injured and Crippled	Vocational school. Deals with pupils over 16 years of age
William H. Davis Free Industrial School for Crippled Children	Day care only, without board

INSTITUTIONS NOT INCLUDED IN THE TABULATED LIST

HOSPITALS

MASSACHUSETTS

CHILDREN'S HOSPITAL, Huntington Avenue, Boston

Date of opening: 1869.

Superintendent: Sister Caroline, of the Sisters of St. Margaret.

Orthopedic surgeon: Robert W. Lovett, M.D.

About one-fourth of the beds are usually occupied by orthopedic cases, one-fourth by other surgical cases, and one-half by medical cases. The department for out-patients has four different services. The surgical service, which includes orthopedic cases, receives out-patients on four days a week, from 2 until 4 p. m. Out of 26,500 visits paid to the dispensary during 1912, 8,319 were by orthopedic cases other than lateral curvature, and 3,303 by lateral curvature cases.

The average number of patients cared for in the year ending December 28, 1912, was 69. This hospital is soon to move to a new building with modern equipment, located near the Harvard Medical School.

There are two gymnastic clinics with an average attendance of about 21 in the clinic for scoliosis and 19 in the clinic for paralysis. Sessions are held on three afternoons and on Saturday morning, and most of the patients are expected to come every time. In some cases exercises are prescribed which the patients may do at home, reporting once in two weeks. A list of exercises, numbered in the order in which they are to be given, is furnished each patient by the director of the work. There is a waiting list of 100. An attendance chart is kept and patients who do not come regularly are dropped. The work is in charge of seniors from the Sargent School of Gymnastics.

A social service department is in charge of a graduate nurse of this hospital, who received special training at the Boston School for Social Workers. She has several pupil nurses as assistants.

Many other graduates of this training school hold responsible positions as superintendents and head nurses in children's hospitals and country institutions. Arrangements with general hospitals in Boston permit the nurses in training at the Children's Hospital to study adult nursing for three or four months. The applications for admission to the school exceed the number of vacancies.

The hospital maintains a brace shop where appliances are sold at cost to patients unable to pay more. The social service department has organized a fund for the purchase of braces for cases unable to pay even the cost price. Appliances are also sold to other hospitals and for surgeons' private cases, at an advance over the cost price.

NEW YORK

NEW YORK CITY CHILDREN'S HOSPITAL (Department of Public Charities), Randall's Island

Established: 1837.

Superintendent: Mrs. M. C. Dunphy.

Orthopedic surgeon: (for normal children) Charles Ogilvy, M.D.

This general hospital for children does not separate the orthopedic cases from the regular surgical cases. At the time of the visit in 1913 there were about 70 orthopedic cases; some were new and others had been there for a long time. There is no fixed capacity; all cases sent are admitted.

The wards for surgical cases, where all orthopedic cases are cared for, are located in a separate building from the one in which chronic cases are cared for. They are in a one-story brick building, with unscreened windows on all sides. The building is old and lacks many features commonly found in modern hospitals. Near this building are shacks, occupied during the day in pleasant weather by surgical cases.

Children between the ages of two and sixteen are admitted. Examinations are made at the city dispensary and all cases except those of lung tuberculosis are taken; the feeble-minded are segregated.

The hospital plans to discharge the children before they are sixteen, but sometimes they have to be kept longer. The social worker tries to find homes for them, return them to friends or place them in other institutions.

There is a surgical building where all operations are performed and isolation buildings for various contagious diseases. The orthopedic cases are all housed on the first floor.

A regular public school is attended by all the children who are well enough to go. The courses cover regular grades and there is some industrial work, which is done out of doors when this seems best. The children are carried to and from the school in carts and wagons. Those who can not walk are carried to the carts by male attendants.

SETON HOSPITAL, Spuyten Duyvil Parkway, New York City
(In charge of the Sisters of Mercy)

Date of opening: 1895.

Superintendent of the hospital: Sister Frances Ignatius.

Superintendent of Nazareth Branch for Women and Children: Sister Mary James.

Orthopedic surgeon: Russell A. Hibbs, M.D.

Seton Hospital is a large institution for the care of tuberculosis cases, of both sexes and all ages. This hospital meets a special need by receiving considerable numbers of children who have both bone and lung tuberculosis, cases not usually welcomed by orthopedic wards in general hospitals or by orthopedic hospitals.

The majority of the patients are men with tuberculosis of the lungs. During the year ending December 31, 1911, 783 men were cared for and 516 patients were treated in the Nazareth Branch for Women and Children. Seventy-eight of the children were classed as orthopedic cases.

The children are housed in wooden buildings, including one substantial building used almost entirely for orthopedic cases. The sleeping pavilions have steam heat connections, and are made warm in winter for dressing and undressing by closing the windows for half an hour both in the morning and at night. Some of the children sleep in tents or under awnings attached to the pavilions, when weather permits. All the rooms have abundant provision for the entrance of air and sunlight. Floors are bare, except for strips of rubber matting and of linoleum. Bathrooms have composition floors. All walls are painted. The thresholds are low.

The pressure of applicants who are lung cases is greater than that of orthopedic cases.

Each child who is well enough goes to school for two hours each day. One of the Sisters is the teacher; she has 60 pupils in all and the classes usually range from kindergarten to 4A. The children are graded as accurately as possible. Many of them have attended school irregularly before coming to the hospital.

PENNSYLVANIA

PHILADELPHIA ORTHOPÆDIC HOSPITAL AND INFIRMARY FOR NERVOUS DISEASES, 17th and Summer Streets, Philadelphia

Date of opening: 1868.

Superintendent: Miss Margaret S. Wilson.

Surgeon: G. G. Davis, M.D.

This hospital has 126 beds, of which 86 are in wards and 40 are in private rooms. Of the 698 patients treated during the year ending December 31, 1911, 442 were in wards and of these 280 were free cases. Of the total number of cases 205 were chiefly orthopedic.

There is a large dispensary service which recorded 7,646 visits of surgical cases and 15,016 visits of nervous cases. A large proportion of these visits were for massage and electrical treatments. The orthopedic clinics are held three days a week, with a different surgeon in charge on each of the three days. There is a training school for nurses with 32 registered. A special class for massage and electricity is held with 13 pupils.

This city hospital, with full modern equipment, has not been scheduled because the work is not exclusively for orthopedic cases.

WISCONSIN

CHILDREN'S FREE HOSPITAL, Milwaukee

Date of opening: 1894.

Superintendent: Gertrude I. McKee, R.N.

This hospital has 65 beds, of which at least 20 are usually occupied by orthopedic cases. Operations are performed by general surgeons. The building is a former residence so transformed that hospital standards of sanitation are met.

CONVALESCENT HOSPITALS OR HOMES

MASSACHUSETTS

CONVALESCENT HOME OF THE BOSTON CHILDREN'S HOSPITAL, Wellesley Hills

Date of opening: 1874.

Head nurse and housekeeper: Miss Gertrude J. Davidson.

This convalescent home for children discharged from the Boston Children's Hospital is supervised by the same Sisters of St. Margaret who have charge of the city hospital, and by the same medical staff. All kinds of convalescent cases are sent to the country branch; one-half the beds are kept for medical cases, one-half for all kinds of surgical cases, among which the orthopedic cases form so large a majority that they usually constitute about one-third

of all the children in the institution. There are no bed cases, but several of the children lie on cots all day.

The average number cared for was 56 in 1912. The home has 90 beds. The main building is of brick with a second story used for employes only; it is connected by corridors with one-story wooden buildings which contain the children's dormitories, and a large and very well lighted play room where the children spend much of their time. The buildings are planned with as careful consideration of the easy movement of the children and their rapid transfer from the building in case of fire, as though only crippled children were residents. There are no thresholds and strips of rubber are laid on floors in the halls. Although the children live entirely on the first-floor level and could be taken out of the building quickly in case of need, there are fire extinguishers, standpipes and hose.

There is a separate ward with bath for contagious diseases, also an infirmary with two beds. The interior finish of the buildings has been planned with about the same degree of reference to sanitary details which is usual in the convalescent hospitals we have scheduled. Some floors are of a special red composition; those of the wards are of bare hardwood; all walls are painted; doors are flat. Clothing worn by the children is supplied by the institution; that which they wear when they come is not used again until they are sent home.

There are three visits a week by doctors from the city hospital.

A kindergarten teacher comes every afternoon except Saturday, and supervises the children's play.

NEW JERSEY

Children's Sea-Shore House, Atlantic City

Date of opening: 1872.

President of Board of Managers: William H. Bennett, M.D.

Orthopedic surgeons: William Jackson Merrill, M.D., Frank D. Dickson, M.D.

This seaside convalescent home has a department for sick infants with their mothers, one for children under twelve without their mothers, one for older girls, and a camp for older boys. The entire capacity is for more than 400. The institution is housed in modern wooden buildings on the cottage plan. Some of the cottages are open only in summer, but the wards for children include 70 beds set apart throughout the year for cases of tuberculosis of bones and glands. There is no discrimination as to color. While many of

the patients coming to the institution, especially in summer, remain for brief periods, usually not more than ten days, the cases of bone and gland tuberculosis are allowed to remain for many weeks. Out of 180 of these cases during the year 1911, many stayed for several months and three for the entire year.

It receives orthopedic cases from many general hospitals in Philadelphia, especially the Hospital of the University of Pennsylvania, and in large degree fills the place of convalescent branches connected with the city hospitals.

NEW YORK

Convalescent Children's Home, Chappaqua

Opened in 1908 under the auspices of the Children's Aid Society.

Superintendent: Mrs. Marion H. Withycomb.

This institution is a home for convalescent children from New York City. In the year ending September 30, 1912, it had an average daily attendance of 116. About 40 crippled children are usually included. They are cared for in rooms planned for their special comfort, with thresholds omitted. Some come for short periods only, in fresh air parties; others are allowed to stay somewhat longer, but the home does not attempt to provide for very long-time convalescent cases.

The home has its own physicians who are called upon whenever needed, but most of the crippled children who come to Chappaqua have been in attendance at some dispensary in the city under the care of a surgeon. In such cases the home sends a nurse to New York with the patient when the surgeon requires it, and the children continue treatment under the same specialist who originally had charge of their cases.

Country Convalescent Hospital, Rochester

(Privately maintained)

Date of opening: Opened for summer of 1908 and continuously since the summer of 1909.

Orthopedic surgeon: Ralph R. Fitch, M.D.

This small convalescent hospital near Rochester is financed entirely by Dr. and Mrs. Ralph R. Fitch. Dr. Fitch is an orthopedic surgeon. He sends to this small institution some of his poorer patients whose homes do not afford conditions proper for convalescence. The parents are encouraged to make small payments, if they are able to do so, because it is thought better that they

should not feel the element of charity in the work done for their children any more than can be helped. Very few are able to pay anything, and the maximum amount is seldom more than one or two dollars per week for any child. Many of the cases have bone tuberculosis.

The building used is a transformed barn on grounds belonging to Dr. Fitch. The building has been completely refinished with narrow boards for wall coverings, bare floors, hot-water heat and modern plumbing. It is worthy of study by anyone desiring to build a simple but adequate country place for a small number of crippled children, where the utmost use is made of the space available, and where arrangements for fresh-air sleeping are of the best. The children's beds stand on a porch 12 feet wide which extends along two sides of the house. The porch has a solid wooden railing between 3 and 4 feet in height and is screened above that level. There are windows which drop in sections into the wooden railing. They are raised in case of storm and on the coldest days in winter, at night, and in the morning while the children dress and undress. The heating arrangements are so good that the porch can be made reasonably warm within fifteen minutes after the windows are closed. In addition to this porch the first floor has a big living room with fireplace, a kitchen, bathroom and linen closet. There are rooms on the second floor for the two graduate nurses and the cook. The children are kept for unlimited periods. The institution has only 10 beds and many more could be filled; nevertheless, the children admitted are always kept until their cure is entirely completed. Several of the children have been continuous residents since the opening for all-the-year work in 1909. By this plan the fruits of the beneficent work of the hospital are assured to its patients.

The provisions for physical care of the children could hardly be bettered; the only added advantage they would have in a larger convalescent hospital would be in educational directions. A teacher has sometimes come for several hours a day during the summer, but it has not been possible to arrange for teaching in winter because the institution is too far away from any school to secure the part time of a teacher, and the number of children old enough and well enough to give much attention to school work is too small to warrant engaging a teacher for her entire time.

The homelike atmosphere which might be expected with the small number of children cared for is fully realized.

ST. AGNES HOSPITAL FOR CRIPPLED AND ATYPICAL CHILDREN, White Plains (In charge of the Sisters of St. Francis)

Date of opening: 1908.

Superintendent: Mother M. Catherine.

Orthopedic surgeon: Francis E. Butler, M.D.

All kinds of orthopedic cases are taken.

This hospital cared for 128 orthopedic cases during the year ending January 1, 1911, in addition to a large number of atypical, or mentally deficient children (the exact number of the latter is not given in the printed report). It has a well equipped operating room and is prepared to give full hospital treatment.

The institution has 16 acres of land, of which 12 acres are cultivated as gardens; the remaining space is used for lawns and a playground. The main building, school building, and cottage most used by the cripples are of brick, partly fireproof. Other buildings, including an isolation cottage, a laundry building with second-floor rooms for quarantine purposes, the manual training shop and the carpentry shop are of wood. There is an iron fire-escape of special merit at the rear of the main building; it is 6 feet broad, railed, has corrugated steps to the ground and a metal roof. Exits are on the level of each floor from a porch. This outside stairway is commonly used by the children in going to upper floors of this building. Most of the bed cases are in the main building, but 60 of the crippled children sleep in a special cottage with two stories. It has a special enclosed stairway, but no fire-escapes.

Most of the cases are sent by the Department of Public Charities.

There is a visiting orthopedic surgeon and a staff of consultants; some of the Sisters have been trained as nurses.

There is a graded school with separate classes for crippled and atypical children. During the year ending January 1, 1911, there were 150 children of both types in attendance. There were two classes for cripples and two for atypical children in addition to a kindergarten. Sessions were held from 9 until 11:30, and from 1 until 3:30, every day except Saturday.

A great deal of hand work is done in all of the classes, including sewing and kindergarten processes. Singing and drawing lessons are also given. Most of the vocational training has grown out of the life of the hospital. The girls learn sewing and all kinds of housework. At the time of our visit five or six girls spent a good deal of time in general housework and four met daily, at the close of the school session, to sew. Many of the atypical children do

small tasks about the institution, but few of the cripples are able to help. A class in basketry is taught by one of the Sisters for an hour each week; 12 children attend, including some of those who are crippled and some of the atypical children. Manual training classes are taught by one of the Sisters. Twelve boys are divided between two classes. They take manual training for two years, then begin practical work with the institution's carpenter. Six of the older boys have been working with him in the construction of a bungalow to be used by some of the children. Two boys work in the engine room and two with the farmer.

The per capita rate paid by the city for the care of the children covers a large share, though not all, of the cost of operating the hospital.

OHIO

RAINBOW COTTAGE (Affiliated with Lakeside Hospital), Cleveland

Date of opening: 1890.

Superintendent of nurses: Miss Arvilla Patton.

Visiting surgeon: Gordon N. Morrill, M.D.

Out of 233 cases treated during the year ending December 31, 1911, 130 are surgical cases, most of them orthopedic. The medical cases include children with heart disease and chorea, and convalescents from typhoid fever or other long illnesses. If the older girls who come for two-week periods are not counted, the average stay is somewhat over two months, but a few cases have stayed much longer, even two years.

This convalescent country hospital can accommodate 62 patients in summer; the capacity of the buildings which are fitted for use in winter is 26. The cottage is located about 10 miles from the center of Cleveland, in a section which is becoming suburban in character. The institution owns 10 acres of land, including a large pine grove. Fruit trees and grape vines make large contributions to the food supply. There is a main building, a play house with a small stage, and a third house containing a large dining room and kitchen, all of wood. A small building for quarantine of contagious diseases was burned shortly before the institution was visited. The floors in the hall and play room are covered with cork carpeting which costs about the same as hardwood flooring. It is preferred because it can be washed or varnished easily and because the children's braces do not harm it. Walls are painted; in the sun room the walls are ceiled with wood,

and there is wooden wainscoting halfway up the walls of some other rooms; bathrooms are finished with tile. There is a separate tent where the children come to wash their hands in running water after they have been playing out of doors. A pipe is run horizontally above a large trough at such a height that the children can easily reach the many faucets. Inclines facilitate the movement of the children in and out of the building. A tent accommodates eight older girls who come for two weeks each. None of the other children sleep out of doors, but many of them have second beds in an outdoor pavilion to which they are carried for the day. There is one sun room with two beds.

The work done has gradually changed from fresh air work to convalescent hospital care with consulting and visiting surgeons and physicians, an interne who is a fourth year student at Western Reserve Medical College, a graduate nurse, a night nurse, and a corps of nurse maids who are taking a one year's course of training. Operations are done at Lakeside Hospital, but there is a surgical dressing room at Rainbow Cottage and cases requiring close medical care are taken.

The cottage shares with Lakeside Hospital the services of a visiting nurse who keeps closely in touch with the children after they return to their homes. The Benjamin Rose Foundation contributes $5,000 a year for the orthopedic work at Rainbow Cottage. A kindergarten teacher does informal teaching for five hours a day, five days in the week.

ASYLUM HOMES

NEW YORK

HOUSE OF THE HOLY COMFORTER FOR INCURABLES, 139th Street and Riverside Drive, New York City

Incorporated: 1880.

Superintendent: Miss M. R. Swarr.

This is a free home for incurables who are without means or friends who can support and care for them, or who can not be received in homes or hospitals. The better class of Protestant women and female children are taken, and there is a trial period of three months.

The capacity of the home is about 80. Most of the cases are adults and in 1912 there were only about 15 children out of 78 inmates. These children were crippled and from four to eighteen years of age.

The house is a large one, with a big dining room on the first floor and a school room on the second floor. There is one teacher and the children are not graded. There is a table instead of desks. A little sewing is the only branch of industrial work taught. A few children have been placed in positions, but most of them go back to their homes or are sent to other institutions.

PENNSYLVANIA

GOOD SHEPHERD HOME (for Crippled Orphans, Infant Orphans, Destitute Children, Old People, and Aged or Disabled Ministers), Allentown

Date of opening: 1908.

Superintendent: Rev. John H. Raker.

This home cares for 41 children and seven old people. Fifteen of the children are crippled. There is no surgical attention, but the children receive careful and affectionate treatment.

This home undertakes to care for five different classes of dependents or defectives, not more than two of which belong together. It also undertakes to carry on a nurses' training school, and to conduct a placing agency—all on an income of about $5,000 per year. The per capita expense is only $140 per inmate: too little for the classes cared for. A fine spirit pervades the home.

SUMMER HOMES

NEW JERSEY

CHILDREN'S COUNTRY HOME, Westfield

Date of opening: 1892.

Superintendent: Mrs. Emily Schwartz.

This country home is open from the first of June to October. It began as a place for fresh air parties of children from New York.

The capacity is 25 and there are seldom any vacancies. About 50 different children are cared for each season. All classes of children who need convalescent country care are taken, including children with nervous troubles. An increasing proportion, however, are orthopedic cases from the Home for Destitute Crippled Children in Newark.

The building is beautifully located in wooded country, about two miles from the railroad station. There are 10 acres of land, including a garden which furnishes all of the vegetables. The wooden house, originally a residence, has been enlarged and renovated.

The floors are of bare hardwood; walls are calcimined except

in dining room and wards, where they are of narrow boards. The house is heated by furnace and lighted by kerosene lamps. There is a windmill with large water tank, and connection for hose on each floor of the building; outside wooden stairs with rails lead to the ground from both dormitory wings.

The sleeping arrangements are good. A special feature is the provision for outdoor sleeping for the children in one dormitory, which has a screened piazza 3 feet wide on each side. There are 11 windows and a bed stands against each one. The beds have casters which run easily in narrow strips of board nailed to the floor. They are run part way out of the window so that the child's head is out of doors while he sleeps. It is only in case of storm that the beds are moved inside and windows lowered. For some architectural reason the second large dormitory could not be built in similar fashion, but the 19 windows furnish almost solid walls of glass and cross ventilation is possible, which secures a close approach to outdoor sleeping. Most of the children are in these two dormitories. Three smaller rooms have three or four beds each. The rooms for the matron and her assistants are placed near those of the children. There is a covered play pavilion in the yard; also a basement play room with cement floor, at the ground level, and a toilet near it.

The length of stay, formerly two weeks, has been extended to six or eight weeks and sometimes for the entire summer. The financial resources of the home do not permit its being kept open for the entire year.

The children are not expected to help with the housework. In the matron's opinion they do not stay long enough to learn much by helping, and they are expected to play out of doors whenever the weather permits. The children's lives are very happy.

NEW YORK

SEASIDE HOME FOR CRIPPLED CHILDREN, 4 Summerfield Avenue, Arverne

Date of opening: 1912.

President: Miss Evelyn M. Goldsmith.

This is a summer home. It takes many pupils from the special classes for crippled children in the New York public schools and some children who have been in hospitals. The house is open from the last of June until early in September. Two hundred different children were received in the summer of 1912, for minimum periods of two weeks, extending in many cases to four or six weeks. About

15 of the children remained throughout the summer. The president estimated that 400 different children would be cared for during the summer of 1913. It is possible for the house to accommodate 50 at a time.

The application card has a place for the physician's name and other statements, including his recommendation as to whether or not the child is to have sea baths. Except in the cases of children whose physicians prohibit ocean bathing, the children go into the water daily. Considerable emphasis is placed upon abundant and nourishing food, including eggs and milk. The milk is served in the morning and afternoon as well as at meals.

Some of the children are learning to do manicuring and have made money by receiving patrons on the porch of the summer home; others have earned money by developing photographs for summer residents. It is hoped that some of the children may be able to keep on with the work they have learned to do during the summer. One girl now has a position as manicurist in a department store.

BLYTHEDALE (Convalescent Home for Tuberculous Crippled Children), Hawthorne

Date of opening: June, 1904. In 1912 was open for whole year.

Matron: Miss E. M. Crysbe.

Orthopedic surgeon: F. H. Albee, M.D.

This country convalescent institution at the time this study was made was open only in summer. In 1912 and 1913 it was kept open during the winter, and should henceforth be classed with the institutions in our scheduled group of convalescent hospitals and homes. It is maintained by the Visiting Guild for Crippled Children of the Ethical Culture Society of New York.

None of the children are bed cases, but convalescent tuberculosis cases requiring some degree of medical supervision can be taken because the matron and the nurse are both graduate nurses. The capacity is 35, and 32 children were cared for during the first winter.

The home occupies a wooden building designed and built for the purpose, on an elevation which affords good circulation of air and beautiful views of the wooded hills. There are four acres of land, including a large vegetable garden where the children do a good deal of work. The floors in the house are bare except for the big rug in the living room; all walls are painted. The surgical dressing room has composition flooring. The house is heated by steam and has its own water system. The children sleep in four dormitories, two for boys at one end of the building and two for

girls at the other. The matron's room and the nurse's room are also at opposite ends of the building, near the different dormitories. An isolation room on the second floor can be connected with the bathroom on that floor, if necessary. All other rooms for the children are on the first floor. There are unrestricted outdoor play space and a large porch, part of which is enclosed in glass and used as a sun room in winter. There is a living room which has a large stone fireplace, a piano, phonograph, and library of children's books. There is another fireplace in the cheerful dining room. Both boys and girls between the ages of four and sixteen are admitted; most of them have been patients at the Post-Graduate Hospital with which the surgeon for this home is connected.

Nourishing food is furnished in abundance, especially eggs and milk. The children have milk in the forenoon and in the afternoon, as well as at meals. The parents are asked to furnish shoes; other clothing is supplied by the institution.

Abundant provision is made for the entertainment of the children. A resident kindergarten teacher amuses them and does elementary teaching.

Most of the children take care of their own beds and some of the older girls do their own ironing. Some girls who have worked in the Crippled Children's East Side Free School and have learned to do embroidery, make articles which are later sold at the school.

HAXTUN COTTAGE AT THE CHILDREN'S SUMMER HOME, Bath Beach
(Maintained by the Children's Aid Society of New York)

Date of opening: 1888.

Superintendent: Charles R. Fry.

This cottage is one of a group belonging to a summer home to which the Children's Aid Society of New York sends children in parties for periods of one or two weeks. It is located near the seashore. One wooden building with 16 beds is reserved for crippled girls between the ages of three and fifteen. They come in parties of 16 and remain for two weeks. Most of them have been patients at the Hospital for the Ruptured and Crippled in New York City. The children to be sent are chosen by the hospital; no cases needing to stay in bed are admitted.

The house has painted walls; the dormitory floor is of bare wood and linoleum is used on the floor of the dining room, which serves also as the children's general living room. Escape in case of fire would be easy by a porch which runs the entire length of the dormi-

tory. Nearly every bed in the dormitory can be seen from a room occupied by one of the nurses.

The employes at this cottage include only two graduate nurses and a housekeeper. The food is brought over from the general kitchen, reheated on a gas stove if necessary, and served in the dining room of the cottage.

SUMMER HOME FOR CRIPPLED CHILDREN, 2425 Ocean Avenue, Sheepshead Bay

Date of opening: 1911.

Parties of crippled children are received at the home of Mrs. Harrison Gray Lamson at Sheepshead Bay, throughout the summer. Girls come in one party, boys in the next, and each group of nine remains for two weeks. Mrs. Lamson wishes to provide these summer outings especially for children who, for some reason, are not eligible for admission to institutions receiving other crippled children. Children very much deformed are not refused, but those requiring medical care can not be taken. Some of the children are students in the public schools with which Mrs. Lamson was formerly connected as a teacher.

The children sleep in a wooden pavilion 15 feet square, with screens occupying about half the wall space. On two sides the screened sections are covered with awning curtains. They ordinarily eat at a table in the kitchen of the residence; on Sunday evenings they are invited for supper with Mr. and Mrs. Lamson in the dining room. All the work in connection with the children is done by Mrs. Lamson and her two maids.

The children help pick vegetables in the garden; it is planned later to have the first parties come early enough to learn something about planting seeds.

A considerable share of the cost of this work has been met by Mrs. Lamson; but there have been some contributions and other sums have been raised by social occasions, including a bazaar.

SUMMER HOME FOR CRIPPLED CHILDREN, Southampton

(Maintained by the Post-Graduate Hospital, New York)

Date of opening: 1904.

Superintendent: Miss Frances M. Melvin.

This summer home cares for 30 convalescent orthopedic cases from the Post-Graduate Hospital of New York.

The home is located on a slight rise of land about three miles from Southampton. There is a large two-story wooden cottage of

modified bungalow style and a separate building with one large room 18 by 30 feet, which is used as play room and school room. These specially planned modern buildings are connected by a covered passageway. The walls are painted and floors are hardwood, bare and unpolished. The residence building has a great deal of porch space, most of it screened. About half of the children, including all those with tuberculous abscesses, sleep on out-of-door porches. The children take special pleasure in their sunny and attractive play room.

The children are usually between the ages of four and fourteen. There is wide variation in their physical condition. There are usually four or five that might be termed hospital cases, including children on Bradford frames, but the large majority of the children are not bed cases. The institution receives cases requiring some medical supervision. The home is open from the first of June until the first of October and the same children stay throughout this period.

The superintendent is a graduate nurse who has had extended experience with orthopedic cases. During the winter the superintendent acts as visiting nurse for the orthopedic ward in the Post-Graduate Hospital, and her cases include the children for whom she cared during the summer.

There is a cook stove in the play room which is used by one of the maids in giving cooking lessons to the older girls. After such lessons they serve tea themselves and eat the food they have prepared. Each older girl takes care of three beds and has also special charge of one smaller child. The children sweep and dust the play room and keep it in order. They are not dressed in uniform.

A teacher who has taught in special classes for crippled children in day schools in New York stays at the home throughout the five months when it is open. During the summer she gives kindergarten instruction including much simple hand work. In the month of September the school is organized with classes from the kindergarten to grade 6A. The work is then made to conform as closely as possible to that in the public schools in order that the children who go to school may continue with their regular classes when they return to the city in October. The atmosphere of this home is one of comfort and good humor.

ROBIN'S NEST, Tarrytown-on-the-Hudson

Date of opening: 1891.

Superintendent: Miss A. B. Abbott.

This summer home for convalescent crippled children is an independent organization, but all its cases come from the Hospital for the Ruptured and Crippled in New York. For more than twenty years it has been open from the first of May until the first of December, and parties of 22 children are taken for two months each, so that three groups are received each season. Alternate parties are made up exclusively of girls and of boys. No bed cases are taken, but many of the children have tuberculous abscesses which are dressed by the graduate nurse. There are occasional visits by a surgeon from the Hospital for the Ruptured and Crippled and a local physician comes when needed.

The building is a former residence with about an acre of land. There are vegetable gardens in which the children work. The building has been refinished for its present purpose, with painted walls and composition floors in the surgical dressing room and some of the bathrooms. Pails of water are kept on the different floors for use in case of fire. Fire drills, with two canvas chutes, are held occasionally.

The children sleep in several small dormitories. The nurse's room is opposite the largest dormitory, which has 11 beds. Sometimes two of the youngest children sleep in the nurse maid's room. Liberal provision has been made for both physical care and amusement of the children. A small section of the porch has been made into a sun parlor where the children play often on cool or rainy days. The yard has big wooden swings and abundant space for games.

There are three dining rooms: one for the officers, one for twelve of the older children, and one for the younger children. The table service is more like that in a comfortable home than in the majority of the other institutions visited; white tablecloths and pretty dishes are used. There is a staff of nine employes. No expense limit is set in the procuring of nourishing and appetizing food. Between 25 and 30 quarts of milk are used daily. The children drink it at meals, and milk, buttermilk, or beef tea is served at 10 in the morning and at 3 in the afternoon.

One of the managers furnishes the uniforms worn by all of the children. Boys wear blue overalls and the girls wear gingham dresses which are identical in cut and material. The garments come in sizes from one to seven, and there is no attempt to keep individual garments for the same children. This is the only detail at the Robin's Nest which suggests the life ordinarily associated

with institutions. In some other directions more than ordinary attention is paid to providing a non-institutional background.

A trained kindergarten teacher instructs the children in elementary branches and supervises their play. The kindergarten classes are held in a large room with many windows, which is also an indoor play room.

The children do a great deal of hand work beyond the grade ordinarily done by kindergarten pupils. The girls sew a great deal; they have made simple aprons and sunbonnets, as well as fancy bags and cases for toilet articles. The boys make trays and lamp shades of brass. All of the children draw and cut out pictures of the birds they see on the grounds and of the flowers growing within reach of the home; these and other pictures are colored with water colors. The children have done some clay modeling and simple work with reed and raffia. Articles have been sold on rare occasions, but the children have taken home or back to the hospital ward most of the things they have made.

RHODE ISLAND

Crawford Allen Memorial Hospital, North Kingston
(Branch of Rhode Island Hospital)

Date of opening: 1907.

Superintendent: John M. Peters, M. D.

This country institution takes children from the Rhode Island Hospital in Providence. It is not exclusively for crippled children but they are usually in the majority. At the time of our visit there were 36 orthopedic cases among the 43 children. The proportion differs between the orthopedic and medical cases for the whole season because many of the medical cases remain for only a few weeks, while most of the crippled children stay for the entire six months during which the institution is open. Some of the children return to the hospital in Providence, others go to their homes where they are watched by visiting nurses from the hospital. About two-thirds of the children are bed cases.

The institution owns 106 acres of land which, except for a large vegetable garden, are not commercially used. The children sleep in a three-story brick building, a former residence, which also furnishes space for rooms of employes and a general kitchen. But the children eat and live for the entire day in a pavilion close to the seashore, at a considerable distance from the other building. This wooden pavilion, which cost about $5,000, has one very large room used as dining room and living room, a kitchen and toilet rooms,

a porch used as an outdoor school room, and a large uncovered platform on which the children unable to leave their cots lie for the greater part of the day. It is possible that at some time in the future shacks or pavilions for sleeping will be built near the water, so that it will not be necessary to move the children so great a distance each night and morning.

The superintendent is a graduate nurse. There are two other graduate nurses and four nurses in training from the Rhode Island Hospital who rotate every two months. Although the officers would like to give more of the nurses opportunity to work for part of the summer in the country, this is not done because frequent changes in personnel mean loss to the children whose individual needs can not be learned until the nurses have been for a little time at the institution.

Whenever the water is at a temperature of 70 degrees or more, sea baths are taken by all the children, including those with open sinuses and without regard to what sort of apparatus they wear. Plaster jackets are made in such a way that they can easily be taken off. Children whose treatment requires their being strapped to a frame are put onto a special frame before being dipped into the water. If the temperature of the water is between 65 and 70 degrees, the bed cases are not given baths but the up-children are allowed to go in if they desire, and most of them do so.

For a short period each sunny day the cases with open sinuses lie almost unclothed in the sun. The sun bath may not be more than five minutes for the first few days but it is gradually lengthened.

A teacher, who is a normal school graduate and has taught for four years, has charge of the school which does work extending through the sixth grade. Thirty of the children are able to do school work and the teacher finds that she can grade them fairly accurately. Those in cots wheel themselves or are wheeled by the other children to the school porch in time for their classes.

DAY SCHOOLS

MASSACHUSETTS

INDUSTRIAL SCHOOL FOR CRIPPLED AND DEFORMED CHILDREN, 241 St. Botolph Street, Boston

Date of opening: 1894.

Superintendent: Miss Mary M. Perry.

Chairman medical committee: E. G. Brackett, M.D.

This institution is a private day school with both grade classes

and vocational classes. The average number of children in the grades for the year ending April 1,.1912, was 90. The average number in the industrial department was 29. It has a capacity for 100 grade pupils and 50 industrial pupils. There is a waiting list.

The school has one large building for general use and a special building for outdoor grade classes. Both are thoroughly modern in construction, finished with the utmost concern for sanitation and convenience, and fully equipped. There is a large elevator with the shaft entirely enclosed, a second stairway with iron steps, enclosed in a brick wall, also iron stairs attached to the outside of building. Thresholds are absent. Although the building is of fireproof construction, two extinguishers are kept on each floor. The building is heated by steam and lighted by electricity. Windows are kept open for ventilation although a system of heated flues is provided. There are transoms over all doors. Toilet and bathrooms are provided; the toilets provided are of varied heights. The floors are of hardwood, bare, finished in such a way that they are easily kept clean, and the walls are painted. The new building for outdoor school work is the first building in America especially designed for the outdoor teaching of crippled children. It represents at present the acme of attainment in the erection of special school buildings for tuberculous children. The cost was about $15,000. The building has a substantial roof and one brick wall. The other three sides have steel pillars covered with concrete, between which there are sliding glass partitions. The roof is built in monitor form with movable windows in two sections.

Crippled and deformed children who do not require residential care in institutions and who are physically and mentally able to do school work are admitted. There are occasional pupils who use wheel chairs. Most of the pupils are out-patients of hospitals. Feeble-minded children and those with tuberculosis of the lungs are not taken. All pupils must be residents of Boston. Each child entering the school is examined by the physician serving at that time. The children usually continue in this school until they are so far cured that they can go to public schools not for crippled children, or if they are not cured, until they have finished the eight grammar grades. Some of those who complete the eight grades remain to do industrial work in the shops.

The school exercises the most careful supervision over the physical condition of all its pupils. A nurse who is a graduate of the training school of the Children's Hospital of Boston gives her entire

time to the physical care of the children during school hours and visits them in their homes on Saturdays; and every day throughout the summer vacation. No operations are performed at the school, but there is a special room for medical treatment with sterilizers and simple surgical equipment. The nurse gives nasal douches, looks after discharging ears or cut fingers, and does other minor dressings in this room. She also goes through the school rooms each morning and inspects the apparatus worn by the children to see if everything is properly adjusted. There are two rest rooms, one with three beds for girls and one with three beds for boys. The children who are unable to remain in their seats as long as the others are sent for rest at regular times. The nurse loosens their apparatus before they lie down and readjusts it when the rest period is over. She has charge of the distribution of clothes sent in by outsiders for the children. She keeps card records of the children's medical diagnoses, filled out by the doctors. A separate record is kept of the condition of the child's eyes and ears. Still another record catalogue has been begun which shows the home surroundings of each child, by what church the family has been aided, and so forth. The school keeps in touch with the Associated Charities of Boston.

Special gymnastic training is given by a gymnastic teacher. She keeps a record of the height and weight of all the children.

The medical service for the school is supplied by physicians on the medical committee, each one of whom serves for a period of one month. The physician on duty visits the school regularly once a week and other times on call. The nurse sees to it that each child reports at the out-patient department with which he is registered and supervises also the children's visits to the Harvard Dental Clinic where free dental service is given.

Articles made are sold upon order and at occasional fairs.

For full accounts of the educational and industrial work, see chapters III and IV.

Cost of property: $190,000. Year's expenditure per capita: $153.

NEW YORK

CRIPPLED CHILDREN'S EAST SIDE FREE SCHOOL, 155–9 Henry Street, New York City

Date of opening: 1900.

Superintendent: Miss S. Saal.

Orthopedic surgeon: Charlton M. Wallace, M.D.

The aims of this school are thus stated in its last report: "To

improve the children's physical condition, to train them to become self-supporting, and to provide them with work."

The school was organized in 1900. The work was carried on at several different addresses before the opening of the excellent building erected by the Emanuel Lehman Foundation. This modern building is worthy of study by those interested in the erection of special day schools for cripples. It is fireproof in construction. There is a large enclosed elevator around which the main stairs ascend. There is an outside iron stairway, railed, for use as a fire-escape. All doors have transoms and the outside windows are kept open throughout the year, so that the ventilation is excellent. The roof is used as play space after school hours and on Saturdays.

Teachers and equipment for academic work are provided by the board of education of New York City. The city's contribution includes special adjustable desks and seats in all the class rooms except the kindergarten. The curriculum, text books, and methods are identical with those employed in other special public school classes for cripples in the city, and the standards are very little, if any, different from those in public school classes for children who are not crippled. The average number in the school classes is 190.

All other expenses are met by the private corporation which owns the property. The children are brought to school in omnibuses, given hot dinners, and bread and milk each morning and afternoon, and baths twice a week.

One distinctive feature of the school is its weekly clinic, in charge of the orthopedic surgeon, Dr. Charlton M. Wallace. The medical rooms give ample provision for examination of the children, application of plaster of Paris dressings and braces, massage and electrical treatments, and the inspection of eyes, ears, and teeth. In addition to the visiting orthopedic surgeon there are an assistant surgeon, a graduate nurse, and three other experienced nurses. The school accepts the entire physical supervision of the crippled children under its care, except when they need actual hospital treatment. They do not attend other clinics at hospitals.

The effort to find occupations in which crippled children may become self-supporting has resulted in the establishment of a sewing workroom where all kinds of stitches are taught and complete garments of many kinds are made. Twenty-six girls give their entire time to sewing in this shop and are paid regular wages. Most of the work is done to fill orders. The school has also contributed some of its products to sales.

For the year 1913 the receipts from the workrooms were $6,400, of which $4,450 was returned to the workers for wages, and the remainder covered expenditures for materials and other supplies. The receipts did not cover the salary of the director who serves as both business manager and teacher of sewing. It has been found much harder to find profitable employment for boys. Bookbinding was tried and given up. At present several boys are doing machine operating on aprons and at different times two or three have undertaken embroidery.

During the summer months a home for crippled children is maintained by this school at Oakhurst, New Jersey. One hundred and six children can be housed there at one time and each child is able to stay from two to eight weeks, according to his need of country life. The children remaining in the city are regularly visited by a nurse engaged for the purpose, and the system of baths and treatments are continued during the summer at the school building.

The value of the city property owned by the institution is over $180,000. The property at Oakhurst, New Jersey, is worth $25,000. The total operating expense for the year ending November 30, 1912, was $32,000.

MISS SPENCE'S SCHOOL SOCIETY, Foot of East 26th Street, New York City

Date of opening: 1902.

President: Miss Amy Ellis.

Orthopedic surgeon: Charlton M. Wallace, M.D.

This society maintained classes for crippled children at the Henrietta Industrial School of the New York Children's Aid Society for eight years. In September, 1909, this work was given up and a school for crippled children was organized on a ferry boat belonging to Bellevue Hospital and anchored in the East River close to the hospital grounds.

Dr. Charlton M. Wallace holds weekly orthopedic clinics on the boat and a trained nurse is in constant attendance. A teacher and school supplies are furnished by the board of education of New York. The alumnæ of Miss Spence's School supply an omnibus for transporting the children, special chairs for outdoor use, warm wraps and meals, including milk and eggs served when the children reach the boat in the morning and at 4 o'clock in the afternoon, and a hot dinner at noon. The average number of children is 20. All kinds of orthopedic cases are taken. The children admitted

must be able to gain something from school work. Kindergarten processes are taught but there is no vocational training. The children come on Saturdays also for rest and play although no classes are held. There are enclosed rooms for eating, for use during the weekly clinics, and so forth. But the children spend practically all of their time out of doors, on the deck, except in very extreme weather. The expenditure made by Miss Spence's School Society for the year ending March 1, 1910, was $3,967, or about $180 per child.

RHINELANDER INDUSTRIAL SCHOOL FOR CRIPPLED CHILDREN, 350 East 80th Street, New York City

Date of opening: 1890.

Superintendent of grade classes: Miss Katherine R. Stackpole.

Orthopedic surgeon: Brainerd H. Whitbeck, M.D.

Special classes for crippled children were opened by the Children's Aid Society in a building erected by the Misses Rhinelander in 1890. The average daily attendance in the grade classes for the year ending September 30, 1913, was 114. Manual training and trade classes are maintained by the Brearley League.

The average number registered in manual training classes was 62; 21 children over fourteen years of age, most of them graduates of the eighth grade, give their entire time to work in trade classes. The class for girls does sewing, embroidery, and dressmaking; for boys a jewelry class is maintained. For further account of the educational and vocational work, see chapters on Education and Vocational Training. A trained nurse is employed and an orthopedic surgeon, Dr. Brainerd H. Whitbeck, visits the children at the school. Those who are unable to walk are brought to the school by omnibus.

TRADE SCHOOL OF THE HOSPITAL OF HOPE FOR THE INJURED AND CRIPPLED, 159th Street and Mott Ave., the Bronx, New York City

Date of opening: 1912.

Director: Charles Jaeger, M.D.

This trade school for adult men was organized in September, 1912, by Dr. Charles Jaeger, orthopedic surgeon of the German Hospital of New York. He has been interested for many years in artistic hand work; has done work with water colors and made hand-wrought jewelry. The school admits only males between sixteen and thirty-five years of age. There are accommodations

for 50. Those maimed by accident are preferred to those crippled through disease. The school is maintained by a single philanthropist for the present; whether or not he will provide for it permanently is not yet known.

It is expected that modern buildings for the housing of this trade school and for a hospital with which it is to be connected will be built later on land not far from the old residence leased at present for the trade school. The present building stands on high ground and is surrounded by an entire block of land. The workrooms are large, airy, and well lighted, with exceptionally high ceilings. All instruction and a substantial dinner at noon are furnished free. Work rooms have been opened and skilled teachers employed in each of the following five branches:

> The making of reed articles, metal work, mechanical drawing, engraving, and woodwork.

The reed working department is in charge of a foreman who was previously employed by one of the best manufactories of reed articles. All sorts of reed furniture are made, including large willow chairs, small rockers for children, baskets from interesting German designs, foot stools, and large vases for holding flowers with long stems. Old chairs are repaired and provided with new seats. Tabarets, revolving book cases and magazine holders have been made in the woodworking department.

In the metal working room one may see brass bowls of very beautiful designs in various stages of development. It is believed by Dr. Jaeger that there is a good opening for the making of special designs in smaller varieties of hardware, particularly for country homes in the old English and other special styles of architecture, where the door locks and other small metal pieces must accord with the interior finishings of the house. Some locks and panel pieces have already been made in the shop. The teachers of metal work and mechanical drawing each come for only half a day.

An expert engraver is teaching one man to engrave initial letters, monograms, and so forth.

A sixth room contains a large loom for the weaving of silk neckties. Opportunity to learn this trade and the weaving of artistic rugs will be offered later if a sufficient number of men make application for it.

The director desires that all this work shall be on an entirely practical basis, although none of the articles are as yet offered for sale. Articles made in the workshop are kept as evidence of the

kind of work produced by the institution. The chairs will be used in furnishing the house.

It is expected that each man who enters will stay not more than from three to six months, because it is believed that that amount of time will be sufficient to teach him some work by which he can earn his living. Pupils leaving the school will be assisted in securing positions. One of the men now working with reed and woodwork is nearly ready to open a shop of his own. He has many friends. It is believed that his shop will soon have so much business that it will be possible for him to employ some of the others who have learned these trades in the school.

It is possible that a regular workshop will develop later and if this is the case it is hoped that its products may earn possibly 40 per cent of the running expense of the institution. The remainder must be supplied by private charity.

WILLIAM H. DAVIS FREE INDUSTRIAL SCHOOL FOR CRIPPLED CHILDREN, 471 West 57th Street, New York City

Date of opening: 1899.

Superintendent: Mrs. E. Bullard.

Chairman, Medical Board: James Porter Fiske, M.D.

The chairman of the medical board, Dr. James Porter Fiske, examines each child before it is admitted to the school. He also examines all the children before they go to the country home at Claverack for the summer. Children with all kinds of orthopedic difficulties are taken. No feeble-minded cases are desired. There are no fixed age limits but the children usually enter the kindergarten when not less than four years old. It is expected that they will stay until they have finished the eighth grade. They may remain after that in the sewing and wood carving classes, if they choose.

This school is entirely private and receives no aid from the city board of education. The grade work is divided between two teachers: one has the kindergarten and primary grades, the other has the later grammar grades. Ordinary school seats, not adjustable, are used. The program is not so definitely fixed as in the public schools. A sewing teacher and a manual training teacher, who was formerly a pupil in the school, are employed.

Articles made are sold at fairs. The children have been paid a portion of the proceeds. There are usually four or five older girls and one or two older boys who give a large share of their time to industrial work. Elaborate and beautiful wood carving and leather

tooling is done by a crippled young man who has been in the school for more than twelve years, first as a pupil, then as teacher. Two or three of the other boys are able to do creditable work under his direction. In the sewing class the girls make some plain garments and many fancy articles for sale at the fairs.

The children are brought to the school by a wagonette with an experienced attendant. They are given a hot dinner without charge.

From the time the school closes in June until the first of October, the children are kept at the Lulu Thorley Lyons Home for Crippled and Delicate Children at Claverack, New York. According to the last report, printed in June, 1909, the average number in the city day school was 50 and the cost per day was 78 cents for each child. About 85 per cent of the cost of the manual training department, including the payments made to the children, was covered by sale of work at harvest festivals. The average number of children in the country home is given also as 50 and the average cost per day as 69 cents for each child. The financial statements printed in the report are admirably detailed and clear, but their value would be much greater if they were presented annually. The statements for the printed report for 1909 covered a period of three years and two months.

ORTHOPEDIC WARDS IN GENERAL HOSPITALS

Special orthopedic wards are maintained by a number of general hospitals. Among those specially noteworthy are the Lakeside Hospital, Cleveland, Ohio; the Hospital of the University of Pennsylvania, Philadelphia; the New York Post-Graduate Hospital in New York City; the University Hospital of the University of Michigan, at Ann Arbor; the Johns Hopkins Hospital at Baltimore, and the Sanatorium for Hebrew Children of the City of New York, at Rockaway Park, Long Island. The St. Louis Children's Hospital and the Washington University Medical Hospital have special orthopedic wards with dispensary service.

ASSOCIATIONS FOR THE AID OF CRIPPLES

We have not attempted to study the societies which aid cripples. Among the societies of this class are three in New York City: The Association of Public School Teachers of Crippled Children; the Federation of Associations for Cripples; the Association for the Aid of Crippled Children; and in St. Louis is found the Tiny Tim Fund.

OCCUPATIONS AND WEEKLY EARNINGS OF GRADUATES

INDUSTRIAL SCHOOL FOR CRIPPLED AND DEFORMED CHILDREN, Boston, Massachusetts

In the course of the general survey of work for crippled children a list of former students of the Industrial School for Crippled and Deformed Children in Boston, and their present occupations, have been secured. They are printed herewith because they have some suggestive value. A detailed study of the subject should include for each employed cripple an exact statement concerning his physical ability and disability.

(Information given in response to letters in March, 1910, by graduates from the school)

Occupations	Weekly earnings	Physical difficulty
Monotype casting operator	$20.00	Amputation of leg
Lunch cart tender	20.00	Amputation of leg
Manufacturing jeweler	20.00	Hip disease
Cashier	17.00	Hip disease
Printer of cards	15.00	Tumor albus
Bookkeeper	14.00	Hip disease
Town weigher	13.50	Hip disease
In charge of sample department for manufacturer's agent	12.00	Hip disease
Compositor	12.00	Hip disease
Office girl	12.00	Spinal curvature
Sales girl in department store	10.00	Spinal curvature
Sales girl	10.00	Pott's disease
Printer	10.00	Pott's disease
Office girl	10.00	Hip disease
Secretary	9.00	Spinal curvature
Stenographer	9.00	Hip disease
Printer	9.00	Cured hip case
Clerk	8.00	Pott's disease
Stenographer	8.00	Hip disease
Shank-tacking operative in shoe factory	7.00	Hip disease
Press feeder	7.00	Lumbar caries
Power machine operative (on underwear) (Piece work)	7.00	Amputation of ankle
Telephone operator	6.50	Hip disease
Office worker, department store	6.00	Lateral curvature
Stenographer	6.00	Hip disease
Stenographer	6.00	Hip disease
Bookkeeper	6.00	Coxa vara of hip
Fruit and vegetable dealer	5.00	Pott's disease
Electrical apprentice	4.50	Tuberculosis of knee
Sorter of nails	4.50	Lateral curvature
Curtain maker	3.00	Amputation of leg
Chamber worker and seamstress	1.50	Lateral curvature

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